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1936-1937



COLLEGE PARK, MARYLAND

THE UNIVERSITY of MARYLAND

CATALOGUE NUMBER

1936 - 1937



*Containing general information concerning the University.
Announcements for the Scholastic Year 1936-1937
and Records of 1935-1936.*

*Facts, conditions, and personnel herein set forth are as
existing at the time of publication, February, 1936*

Issued Monthly by The University of Maryland, College Park, Md.
Entered as Second Class Matter Under Act of Congress of July 16, 1894.

CALENDAR FOR 1936, 1937, 1938

THE UNIVERSITY of MARYLAND

CATALOGUE NUMBER

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| 1936 | 1937 | 1938 |
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| JULY | JANUARY | JANUARY |
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| DECEMBER | JUNE | JUNE |
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Table of Contents

| | Page |
|---|------|
| UNIVERSITY CALENDAR..... | 4 |
| BOARD OF REGENTS..... | 7 |
| OFFICERS OF ADMINISTRATION..... | 8 |
| OFFICERS OF INSTRUCTION..... | 9 |
| SECTION I—GENERAL INFORMATION..... | 37 |
| History | 37 |
| Administrative Organization | 38 |
| Princess Anne Academy..... | 38 |
| Location | 39 |
| Equipment | 39 |
| Entrance | 41 |
| Regulations, Grades, Degrees..... | 47 |
| Expenses | 50 |
| Honors and Awards..... | 56 |
| Student Activities | 58 |
| Alumni | 62 |
| SECTION II—ADMINISTRATIVE DIVISIONS..... | 63 |
| College of Agriculture..... | 63 |
| Agricultural Experiment Station..... | 84 |
| Extension Service | 86 |
| College of Arts and Sciences..... | 87 |
| College of Education..... | 112 |
| College of Engineering..... | 131 |
| College of Home Economics..... | 142 |
| Graduate School | 147 |
| Summer Session | 156 |
| Department of Military Science and Tactics..... | 157 |
| Physical Education, Recreation, and Athletics..... | 161 |
| School of Dentistry..... | 162 |
| School of Law..... | 171 |
| School of Medicine..... | 175 |
| School of Nursing..... | 178 |
| School of Pharmacy..... | 184 |
| State Board of Agriculture..... | 187 |
| Department of Forestry..... | 189 |
| Weather Service | 189 |
| Geological Survey | 190 |
| SECTION III—DESCRIPTION OF COURSES..... | |
| (Alphabetical index of departments, p. 191) | |
| SECTION IV—DEGREES, HONORS, AND STUDENT REGISTER..... | 300 |
| Degrees and Certificates, 1935-1936..... | 300 |
| Honors, 1935-1936 | 312 |
| Student Register | 320 |
| Summary of Enrollment..... | 369 |
| INDEX | 370 |

UNIVERSITY CALENDAR

1936-1937

COLLEGE PARK

First Semester

| | | |
|-------------|---|---|
| 1936 | | |
| Sept. 14-15 | Monday-Tuesday | Registration for freshmen. |
| Sept. 16 | Wednesday | Upper classmen complete registration. |
| Sept. 17 | Thursday, 8:20 a. m. | Instruction for first semester begins. |
| Sept. 23 | Wednesday | Last day to change registration or to file schedule card without penalty. |
| Nov. 25-30 | Wednesday, 4:10 p. m. Monday, 8:20 a. m. | Thanksgiving recess. |
| Dec. 22 | Tuesday, 4:10 p. m. | Christmas recess begins. |
| 1937 | | |
| Jan. 4 | Monday, 8:20 a. m. | Christmas recess ends. |
| Jan. 20-27 | Wednesday-Wednesday | First semester examinations. |

Second Semester

| | | |
|---------------|---|---|
| Jan. 11-19 | Monday-Tuesday | Registration for second semester. |
| Feb. 1 | Monday | Last day to complete registration for second semester without payment of late registration fee. |
| Feb. 2 | Tuesday, 8:20 a. m. | Instruction for second semester begins. |
| Feb. 8 | Monday | Last day to change registration or to file schedule card without penalty. |
| Feb. 22 | Monday | Washington's Birthday. Holiday. |
| March 25-30 | Thursday, 4:10 p. m. Tuesday, 8:20 a. m. | Easter recess. |
| May 15-22 | Saturday-Saturday | Registration for first semester, 1937-1938. |
| May 24-June 2 | Monday-Wednesday Noon | Second semester examinations. |
| May 30 | Sunday, 11:00 a. m. | Baccalaureate sermon. |
| May 31 | Monday | Memorial Day. Holiday. |
| June 4 | Friday | Class Day. |
| June 5 | Saturday | Commencement. |

Summer Term

| | | |
|------------|------------------|-----------------------------------|
| June 14-19 | Monday-Saturday | Rural Women's Short Course. |
| June 23 | Wednesday | Summer Session begins. |
| Aug. 3 | Tuesday | Summer Session ends. |
| Aug. 5-10 | Thursday-Tuesday | Boys' and Girls' Club Week. |
| Sept. 7-9 | Tuesday-Thursday | Volunteer Firemen's Short Course. |

BALTIMORE (PROFESSIONAL SCHOOLS)

First Semester

| | | |
|--------------------------------|-----------------|--|
| 1936 | | |
| September 14 | Monday | *Registration for evening students (LAW). |
| September 16 | Wednesday | Instruction begins with the first scheduled period (LAW—Evening). |
| September 22 | Tuesday | *Registration for first- and second-year students (DENTISTRY, MEDICINE, PHARMACY). |
| September 23 | Wednesday | *Registration for all other students (DENTISTRY, LAW—Day, MEDICINE, PHARMACY). |
| September 24 | Thursday | Instruction begins with the first scheduled period (DENTISTRY, LAW—Day, MEDICINE, PHARMACY). |
| November 25 | Wednesday | Thanksgiving recess begins after the last scheduled period (ALL SCHOOLS). |
| November 30 | Monday | Instruction resumed with the first scheduled period (ALL SCHOOLS). |
| December 19 | Saturday | Christmas recess begins after the last scheduled period (ALL SCHOOLS). |
| 1937 | | |
| January 4 | Monday | Instruction resumed with the first scheduled period (ALL SCHOOLS). |
| January 25 to January 30, inc. | Monday-Saturday | *Registration for the second semester (ALL SCHOOLS). |
| January 30 | Saturday | First semester ends after the last scheduled period (ALL SCHOOLS). |

Second Semester

| | | |
|------------------------|-----------|---|
| February 1 | Monday | Instruction begins with the first scheduled period (ALL SCHOOLS). |
| February 22 | Monday | Washington's Birthday. Holiday. |
| March 24 | Wednesday | Easter recess begins after the last scheduled period (ALL SCHOOLS). |
| March 31 | Wednesday | Instruction resumed with the first scheduled period (ALL SCHOOLS). |
| June 5, 11:00 a. m. | Saturday | Commencement. |
| June 16 | Wednesday | Second semester ends (LAW — Evening). |

* A student who neglects or fails to register prior to or within the day or days specified for his or her school will be called upon to pay a fine of five dollars (\$5.00). The last day of registration with fine added to regular fees is Saturday at noon of the week in which instruction begins following the specified registration period. (This rule may be waived only upon the written recommendation of the dean.)

* The offices of the registrar and comptroller are open daily, not including Saturday, from 9:00 a. m. to 5:00 p. m., and on Saturday from 9:00 a. m. to 12:30 p. m., with the following exceptions: Monday, September 14, 1936, until 8:00 p. m.; Saturday, September 26, 1936, until 5:00 p. m.; and on Saturday, January 30, 1937, until 5:00 p. m. Advance registration is encouraged.

BOARD OF REGENTS

| | <i>Term Expires</i> |
|--|---------------------|
| W. W. SKINNER, Chairman..... Kensington, Montgomery County | 1936 |
| MRS. JOHN L. WHITEHURST, Secretary..... 3902 St. Paul Street, Baltimore | 1938 |
| W. CALVIN CHESNUT..... Post Office Building, Baltimore | 1942 |
| WILLIAM P. COLE, JR..... Towson, Baltimore County | 1940 |
| HENRY HOLZAPFEL, JR..... Hagerstown, Washington County | 1943 |
| HARRY H. NUTTLE..... Denton, Caroline County | 1941 |
| J. MILTON PATTERSON..... Cumberland, Allegany County | 1944 |
| JOHN E. RAINE..... Towson, Baltimore County | 1939 |
| CLINTON L. RIGGS..... 903 N. Charles St., Baltimore | 1942 |

OFFICERS OF ADMINISTRATION

- H. C. BYRD, LL.D., President of the University.
- ✓ H. J. PATTERSON, D.Sc., Director of the Agricultural Experiment Station;
Dean of the College of Agriculture.
- T. B. SYMONS, M.S., D.Agr., Director of the Extension Service.
- ✓ T. H. TALIAFERRO, C.E., Ph.D., Dean of the College of Arts and Sciences.
- J. M. H. ROWLAND, M.D., Dean of the School of Medicine.
- HENRY D. HARLAN, LL.D., Dean Emeritus of the School of Law.
- ROGER HOWELL, A.B., LL.B., Ph.D., Dean of the School of Law.
- E. FRANK KELLY, Phar.D., Advisory Dean of the School of Pharmacy.
- ANDREW G. DUMEZ, Ph.D., Dean of the School of Pharmacy.
- T. O. HEATWOLE, M.D., D.D.S., Secretary of the Baltimore Schools.
- J. BEN ROBINSON, D.D.S., Dean of the School of Dentistry.
- ✓ W. S. SMALL, Ph.D., Dean of the College of Education.
- ✓ M. MARIE MOUNT, A.B., M.A., Dean of the College of Home Economics.
- ✓ C. O. APPLEMAN, Ph.D., Dean of the Graduate School.
- ✓ S. S. STEINBERG, B.E., C.E., Acting Dean of the College of Engineering.
- ✓ ADELE H. STAMP, M.A., Dean of Women.
- J. D. PATCH, Lt. Col., Inf., U. S. Army, Professor of Military Science and Tactics.
- H. T. CASBARIAN, B.C.S., C.P.A., Comptroller.
- W. M. HILLEGEIST, Director of Admissions.
- ALMA H. PREINKERT, M.A., Registrar.
- F. K. HASZARD, B.S., Secretary to the President.
- H. L. CRISP, M.M.E., Superintendent of Buildings and Grounds.
- T. A. HUTTON, A.B., Purchasing Agent and Manager of Students' Supply Store (College Park).

OFFICERS OF INSTRUCTION

For the Year 1935-1936.

At College Park

PROFESSORS

- C. O. APPLEMAN, Ph.D., Professor of Botany and Plant Physiology, Dean of the Graduate School.
- ✓ HAYES BAKER-CROTHERS, Ph.D., Professor of History.
- ✓ GRACE BARNES, B.S., B.L.S., M.A., Librarian.
- F. W. BESLEY, Ph.D., Professor of Farm Forestry, State Forester.
- L. A. BLACK, Ph.D., Professor of Bacteriology.
- L. B. BROUGHTON, Ph.D., Professor of Chemistry, State Chemist, Chairman of the Pre-Medical Committee.
- W. H. BROWN, Ph.D., Professor of Economics.
- O. C. BRUCE, M.S., Professor of Soil Technology. (On leave 1935-1936.)
- B. E. CARMICHAEL, M.S., Professor of Animal Husbandry.
- R. W. CARPENTER, A.B., LL.B., Professor of Agricultural Engineering.
- E. N. CORY, Ph.D., Professor of Entomology, State Entomologist.
- H. F. COTTERMAN, Ph.D., Professor of Agricultural Education.
- MYRON CREESE, B.S., E.E., Professor of Electrical Engineering.
- TOBIAS DANTZIG, Ph.D., Professor of Mathematics.
- S. H. DEVAULT, Ph.D., Professor of Agricultural Economics.
- NATHAN L. DRAKE, Ph.D., Professor of Organic Chemistry.
- C. G. EICHLIN, A.B., M.S., Professor of Physics.
- W. F. FALLS, Ph.D., Professor of Modern Languages.
- HARRY GWINNER, M.E., Professor of Engineering Mathematics.
- CHARLES B. HALE, Ph.D., Professor of English.
- MALCOLM HARING, Ph.D., Professor of Physical Chemistry.
- HOMER C. HOUSE, Ph.D., Professor of the English Language and Literature.
- L. W. INGHAM, M.S., Professor of Dairy Husbandry.
- A. N. JOHNSON, S.B., D.Eng., Professor of Highway Engineering, Dean Emeritus of the College of Engineering.
- W. B. KEMP, Ph.D., Professor of Genetics and Statistics, Assistant Dean of the College of Agriculture.
- B. T. LELAND, B.S., M.A., Professor of Industrial Education.
- EDGAR F. LONG, Ph.D., Professor of Education.
- C. L. MACKERT, M.A., Professor of Physical Education for Men.
- F. A. MAGRUDER, Ph.D., Professor of Political Science.
- T. B. MANNY, Ph.D., Professor of Sociology.
- FRITZ MARTI, Ph.D., Professor of Philosophy.
- H. B. McDONNELL, M.S., M.D., Professor of Agricultural Chemistry.
- ✓ FRIEDA W. MCFARLAND, M.A., Professor of Textiles and Clothing.
- ✓ EDNA B. MCNAUGHTON, M.A., Professor of Home Economics Education.
- ✓ DEVOE MEADE, Ph.D., Professor of Animal and Dairy Husbandry.

J. E. METZGER, B.S., M.A., Professor of Agronomy.

J. A. MILLER, B.S., Administrative Coördinator of Practice Teaching.

M. MARIE MOUNT, M.A., Professor of Home and Institution Management,
Dean of the College of Home Economics.

J. N. G. NESBIT, B.S., M.E., E.E., Professor of Mechanical Engineering.

J. B. S. NORTON, M.S., D.Sc., Professor of Systematic Botany and Mycology.

J. D. PATCH, Lt. Col., Inf., Professor of Military Science and Tactics.

C. J. PIERSON, A.M., Professor of Zoology.

R. C. REED, Ph.B., D.V.M., Professor of Animal Pathology.

C. S. RICHARDSON, A.M., Professor of Speech.

A. L. SCHRADER, Ph.D., Professor of Pomology.

W. S. SMALL, Ph.D., Professor of Education, Dean of the College of Education,
Director of the Summer Session.

THOS. H. SPENCE, A.M., Professor of Classical Languages and Literatures,
Dean Emeritus of the College of Arts and Sciences.

J. W. SPROWLS, Ph.D., Professor of Psychology.

S. S. STEINBERG, B.E., C.E., Professor of Civil Engineering, Acting Dean
of the College of Engineering, Acting Director of Engineering
Research.

T. H. TALIAFERRO, C.E., Ph.D., Professor of Mathematics, Dean of the College
of Arts and Sciences.

W. T. L. TALIAFERRO, A.B., D.Sc., Professor of Farm Management.

C. E. TEMPLE, M.A., Professor of Plant Pathology, State Plant Pathologist.

A. S. THURSTON, M.S., Professor of Floriculture and Landscape Gardening.

R. V. TRUITT, Ph.D., Professor of Zoology and Aquiculture.

R. H. WAITE, B.S., Professor of Poultry Husbandry.

HARRY WARFEL, Ph.D., Professor of English.

CLARIBEL P. WELSH, M.A., Professor of Foods.

LECTURERS

O. E. BAKER, Ph.D., Lecturer in Agricultural Economics.

I. A. HYSLOP, M.S., Special Lecturer in Insect Taxonomy.

R. E. SNODGRASS, A.B., Division of Insect Pathology and Morphology, Bureau
of Entomology, U. S. Department of Agriculture, Lecturer in
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CHARLES THOM, Ph.D., Principal Microbiologist, Bureau of Chemistry and
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J. FRANKLIN YEAGER, Ph.D., Division of Insect Physiology, Bureau of Entomology,
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ASSOCIATE PROFESSORS

RONALD BAMFORD, Ph.D., Associate Professor of Botany.

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CHARLES W. ENGLAND, Ph.D., Associate Professor of Dairy Manufacturing.

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W. A. FRAZIER, Ph.D., Associate Professor of Horticulture.

SUSAN EMOLYN HARMAN, Ph.D., Associate Professor of English.

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R. P. THOMAS, Ph.D., Associate Professor of Soil Technology.

W. PAUL WALKER, M.S., Associate Professor of Agricultural Economics.

S. M. WEDEBERG, B.A., C.P.A., Associate Professor of Accountancy and
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S. W. WENTWORTH, B.S., Associate Professor of Pomology.

CHARLES E. WHITE, Ph.D., Associate Professor of Chemistry.

R. C. WILEY, Ph.D., Associate Professor of Analytical Chemistry.

ASSISTANT PROFESSORS

RUSSELL B. ALLEN, B.S., Assistant Professor of Civil Engineering.

WAYLAND S. BAILEY, M.S., Assistant Professor of Mechanical Engineering.

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 RALPH RUSSELL, M.S., Assistant Professor of Agricultural Economics.
 J. H. SCHAD, M.A., Ed.D., Assistant Professor of Mathematics (Baltimore).
 MENO H. SPANN, Ph.D., Assistant Professor of Modern Languages.
 E. B. STARKEY, Ph.D., Assistant Professor of Organic Chemistry (Baltimore).
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 — MRS. F. H. WESTNEY, Assistant Professor of Textiles and Clothing.
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 J. B. BLANDFORD, Instructor in Horticulture.
 S. O. BURHOE, M.S., Instructor in Zoology.
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 O. C. CLARK, B.S., Instructor in Physics.
 ✓ BERYL H. DICKINSON, Ph.D., Instructor in Physics.
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 GEORGE W. FOGG, M.A., Instructor in Library Science.
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 L. C. HUTSON, Instructor in Mining Extension.
 WM. H. McMANUS, Warrant Officer, Instructor in Military Science and Tactics.
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 C. L. NEWCOMBE, Ph.D., Instructor in Zoology.
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 — ELIZABETH PHILLIPS JAMES, M.A., Instructor in Physical Education for Women.
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 MARK SCHWEIZER, M.A., Instructor in Modern Languages.
 OTTO SIEBENEICHEN, Instructor in Band Music.

H. B. SHIPLEY, Instructor in Physical Education.
 ARTHUR SILVER, M.A., Instructor in History.
 — KATHLEEN M. SMITH, A.B., Ed.M., Instructor in Education.
 W. C. SUPPLEE, Ph.D., Instructor in Chemistry.
 H. W. THATCHER, Ph.D., Instructor in History.
 BOONE D. TILLET, B.E., M.S., M.Agr., J.D., Instructor in Sociology.
 C. B. TOMPKINS, Ph.D., Instructor in Mathematics.
 G. J. UHRINAK, Corporal Inf., Instructor in Military Science and Tactics.
 WM. F. VOLLBRECHT, Ph.D., Instructor in History.
 G. S. WEILAND, Ph.D., Instructor in Chemistry.
 JOSEPH C. WHITE, Ph.D., Instructor in Chemistry.
 — HELEN WILCOX, M.A., Instructor in Modern Languages.
 LELAND G. WORTHINGTON, B.S., Instructor in Agricultural Education.

ASSISTANTS

G. J. ABRAMS, M.S., Assistant in Entomology.
 JESSIE BLAISDELL, Assistant in Music.
 RACHEL L. CARSON, M.A., Assistant in Zoology (Baltimore).
 ADELAIDE C. CLOUGH, M.A., Assistant in Education, and Critic Teacher.
 FRANKLIN D. COOLEY, A.M., Assistant in English.
 GLADYS DICKERSON, Ph.D., Assistant in Education.
 L. P. DITMAN, Ph.D., Assistant in Entomology.
 W. G. FRIEDRICH, Ph.D., Assistant in Modern Languages (Baltimore).
 ARTHUR M. GIBSON, B.S., Assistant in Chemistry (Baltimore).
 DONALD HENNICK, Assistant in Mechanical Engineering.
 CHARLES D. HOWELL, A.B., Assistant in Zoology (Baltimore).
 FRANCES IDE, M.A., Assistant in English.
 AUDREY KILLIAM, B.S., Assistant in Home Economics.
 OLGA C. LOFGREN, B.S., B.P.E., Assistant in Speech.
 MARY JANE MCCURDY, B.S., Assistant in Home Economics.
 LEONA S. MORRIS, Assistant in History.
 G. L. SIXBEY, M.A., Assistant in English.
 W. C. WARFIELD, B.S., Assistant in Horticulture.

GRADUATE ASSISTANTS

1935-1936

| | |
|----------------------------|--------------------------|
| EARL J. ANDERSON..... | Botany (Plant Pathology) |
| JOHN BARTLETT | Agronomy |
| C. R. BALL..... | English |
| W. E. BELL..... | Agricultural Economics |
| GENEVIEVE BLEW | Modern Languages |
| LILA MARIE BLITCH..... | English |
| WILLIAM P. CAMPBELL..... | Chemistry |
| ALARIC A. EVANGELIST..... | Modern Languages |
| A. P. DUNNIGAN..... | Bacteriology |
| HENRIETTA GOODNER | Modern Languages |
| WILLARD T. HASKINS..... | Chemistry |
| CLARON D. HESSE..... | Horticulture |
| FRANK L. HOWARD..... | Chemistry |
| SAMUEL S. LEAR..... | Dairy Husbandry |
| G. F. MADIGAN..... | Agronomy |
| LEWIS P. MCCANN..... | Botany |
| PAUL R. POFFENBERGER..... | Agricultural Economics |
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1935-1936

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R. W. CARPENTER, A.B., LL.B. Agricultural Engineer

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I. M. MOULTHROP, D.V.M. Assistant Animal Pathologist (Poultry)
W. R. TEETER, B.S., D.V.M. Assistant Animal Pathologist

†Assistant Director of Experiment Station.

* Assistant Dean, College of Agriculture.

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J. B. S. NORTON, M.S., D.Sc. Plant Pathologist
C. E. TEMPLE, M.S. Plant Pathologist
R. A. JEHLE, Ph.D. Associate Plant Pathologist
RONALD BAMFORD, Ph.D. Associate Botanist

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H. S. MCCONNELL, B.S. Associate Entomologist
GEO. S. LANGFORD, Ph.D. Associate Entomologist
L. P. DITMAN, Ph.D. Assistant Entomologist
C. GRAHAM, M.S. Assistant Entomologist
GEO. ABRAMS, M.S. Assistant Entomologist

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T. H. WHITE, M.S. Olericulturist and Floriculturist
S. W. WENTWORTH, B.S. Associate Pomologist
F. B. LINCOLN, Ph.D. Associate Pomologist (Plant Propagation)
H. B. CORDNER, Ph.D. Associate Olericulturist
W. A. FRAZIER, Ph.D. Associate Olericulturist (Canning Crops)
J. B. BLANDFORD. Assistant in Horticulture, Supt. of Horticultural Farm
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GEO. D. QUIGLEY, B.S. Associate Poultry Husbandman

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* Dean of Graduate School.

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| Dorchester | WM. R. MCKNIGHT, B.S. | Cambridge |
| Frederick | H. R. SHOEMAKER, B.S., M.A. | Frederick |
| Garrett | JOHN H. CARTER, B.S. | Oakland |
| Harford | H. M. CARROLL, B.S. | Bel Air |
| Howard | E. K. RAMSBURG, B.S. | Ellicott City |
| Kent | JAMES D. MCVEAN, B.S. | Chestertown |
| Montgomery | O. W. ANDERSON, M.S. | Rockville |
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| Somerset | C. Z. KELLER, B.S. | Princess Anne |
| Talbot | R. S. BROWN, B.S. | Easton |
| Washington | M. D. MOORE, M.S. | Hagerstown |
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 NATHAN WINSLOW, A.M., M.D., Professor of Clinical Surgery.
 RANDOLPH WINSLOW, A.M., M.D., LL.D., Professor Emeritus of Surgery.
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 WAITMAN F. ZINN, M.D., Clinical Professor of Diseases of the Nose and Throat.

ASSOCIATE PROFESSORS

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 THOMAS R. CHAMBERS, A.M., M.D., Associate Professor of Surgery.
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The Faculty Councils of the Baltimore Schools are included in the descriptive statements of the respective schools in Section II.

The Faculty Committees of the Baltimore schools are given in the separate announcements issued by the several schools.

SECTION I General Information

HISTORICAL STATEMENT

The history of the present University of Maryland, before the merger in 1920, is the history of two institutions: the old University of Maryland in Baltimore and the Maryland State College (formerly Maryland Agricultural College) in College Park.

The beginning of this history was in 1807, when a charter was granted to the College of Medicine of Maryland. The first class was graduated in 1810. A permanent home was established in 1814-1815 by the erection of the building at Lombard and Greene Streets in Baltimore, the oldest structure in America devoted to medical teaching. Here was founded one of the first medical libraries (and the first medical school library) in the United States. In 1812 the General Assembly of Maryland authorized the College of Medicine of Maryland to "annex or constitute faculties of divinity, law, and arts and sciences," and by the same act declared that the "colleges or faculties thus united should be constituted an university by the name and under the title of the University of Maryland." By authority of this act, steps were taken in 1813 to establish "a faculty of law," and in 1823 a regular school of instruction in law was opened. Subsequently there were added a college of dentistry, a school of pharmacy, and a school of nursing. No significant change in the organization of the University occurred until 1920, more than one hundred years after the original establishment in 1812.

The Maryland State College was chartered in 1856 under the name of the Maryland Agricultural College, the second agricultural college in the Western Hemisphere. For three years the College was under private management. In 1862 the Congress of the United States passed the Land Grant Act. This act granted each State and Territory that should claim its benefits a proportionate amount of unclaimed western lands, in place of scrip, the proceeds from the sale of which should apply under certain conditions to the "endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such a manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." This grant was accepted by the General Assembly of Maryland, and the Maryland Agricultural College was named as the beneficiary of the grant. Thus the College became, at least in part, a State institution. In the fall of 1914 control was taken over en-

tirely by the State. In 1916 the General Assembly granted a new charter to the College, and made it the Maryland State College.

In 1920, by an act of the State Legislature, the University of Maryland was merged with the Maryland State College, and the name of the latter was changed to the University of Maryland.

All the property formerly held by the old University of Maryland was turned over to the Board of Trustees of the Maryland State College, and the name was changed to the Board of Regents of the University of Maryland. Under this charter every power is granted necessary to carry on an institution of higher learning and research. It provides that the University shall receive and administer all existing grants from the Federal Government for education and research and all future grants which may come to the State from this source. The University is co-educational in all its branches.

ADMINISTRATIVE ORGANIZATION

The government of the University is vested by law in a Board of Regents, consisting of nine members appointed by the Governor each for a term of nine years. The administration of the University is vested in the President. The University Senate and the Administrative Council act in an advisory capacity to the President. The composition of these bodies is given elsewhere.

The University organization comprises the following administrative divisions:

- College of Agriculture.
- Agricultural Experiment Station.
- Extension Service.
- College of Arts and Sciences.
- College of Education.
- College of Engineering.
- College of Home Economics.
- Graduate School.
- Summer Session.
- Department of Military Science and Tactics.
- Department of Physical Education and Recreation.
- School of Dentistry.
- School of Law.
- School of Medicine.
- School of Nursing.
- School of Pharmacy.
- The University Hospital.

The University faculty consists of the President, the Deans, the instructional staffs of all the divisions of the University, and the Librarians. The faculty of each college or school constitutes a group which passes on all questions that have exclusive relationship to the division represented. The President is ex-officio a member of each of the faculties.

The organization and activities of the several administrative divisions are described in full in the appropriate chapters of Section II.

PRINCESS ANNE ACADEMY

Princess Anne Academy, located at Princess Anne, Somerset County, is maintained for the education of Negroes in agriculture, the mechanic arts, and home economics.

LOCATION

The University of Maryland is located at College Park, in Prince George's County, Maryland, on the Baltimore and Ohio Railroad, eight miles from Washington and thirty-two miles from Baltimore. The campus fronts on the Baltimore-Washington Boulevard.

The Professional Schools of the University and the University Hospital are located in the vicinity of Lombard and Greene Streets, Baltimore.

GROUNDS AND BUILDINGS

College Park

Grounds. The University grounds at College Park comprise 291 acres. The site is healthful and attractive. The terrain is varied. A broad rolling campus is surmounted by a commanding hill which overlooks a wide area of surrounding country and insures excellent drainage. Many of the original forest trees remain. Most of the buildings are located on this eminence. The adjacent grounds are laid out attractively in lawns and terraces ornamented with shrubbery and flower beds. Below the brow of the hill, on either side of the Washington-Baltimore Boulevard, lie the drill grounds and the athletic fields. The buildings of the Agricultural Experiment Station adjoin the boulevard. About 100 acres are used by the College of Agriculture for experimental purposes, and for orchards, vineyards, poultry yards, etc. Recently 270 acres additional have been purchased, about two miles north of the University campus, and this land is devoted especially to research in horticulture.

The water supply and sewage disposal are provided by the Washington Suburban Sanitary Commission.

Buildings. The buildings comprise about 28 individual structures, which provide facilities for the several activities and services carried on at College Park.

Administration and Instruction. This group consists of the following buildings: the Agriculture Building, which accommodates the College of Agriculture, the College of Education, the Agricultural and Home Economics Extension Service, and the Auditorium; the Library Building, which

houses the Library and the Executive Offices; Morrill Hall, which accommodates in part the College of Arts and Sciences; the Old Library Building, in which are the offices of the Dean of Women; the Engineering Building; the Student Center, in which are located the offices of the student publications, the Religious Work Council, and the Maryland Christian Association; the Home Economics Building; the Chemistry Building for instruction in Chemistry and for State work in analysis of feeds, fertilizers, and agricultural lime; the Dairy Building; the Horticulture Building, which adequately accommodates all class room and laboratory work in horticulture, and also work in horticultural research for both Government and State; the Plant Research Building; the poultry buildings; the Central Heating Plant; and an Arts and Sciences Building.

Experiment Station. The offices of the Director of the Experiment Station are in the Agriculture Building, while other buildings house the laboratories for research in soils and for seed testing. Other structures are as follows: an agronomy building; a secondary horticulture building; and barns, farm machinery building, silos, and other structures required in agricultural research. Some of the research is being conducted in the Ross-bourg Inn.

Physical Education. This group consists of The Ritchie Coliseum, which provides quarters for all teams, an athletic office, trophy room, rooms for faculty, and visiting team rooms, together with a playing floor and permanent seating arrangements for 4,262 persons; Byrd Stadium, with a permanent seating capacity of 8,000, also furnished with rest rooms for patrons, dressing rooms, and equipment for receiving and transmitting information concerning contests in progress; a Gymnasium, used in part by the Military Department and generally for physical education work; and the Girls' Field House, for all girls' sports. Playing and practice fields and tennis courts are adjacent to the field houses.

Dormitories. Two dormitories, Calvert Hall and Silvester Hall, provide accommodations for 462 men students. Accommodations for 228 women students are provided by Margaret Brent Hall and the new dormitory, completed this year. Gerneaux Hall, formerly used as a dormitory for women students, is now occupied by one of the sororities. The Practice House, which for several years was used as a dormitory, has been turned over entirely to the Home Economics Department.

Service Structures. This group includes the Central Heating Plant; the Infirmary, with accommodations for twenty patients, physician's office, operating room, and nursing quarters; Dining Hall, and Laundry.

U. S. Bureau of Mines Building. A new research laboratory building for the United States Bureau of Mines, to cost approximately half a million dollars, is now under construction on the campus. In this building will be housed a geological museum and a technical library, which will be one of the finest of its kind in the United States. These facilities will be available to students.

Baltimore

The group of buildings located in the vicinity of Lombard and Greene Streets provides available housing for the Baltimore division of the University. The group comprises the original Medical School building, erected in 1814, the University Hospital, the Central Office building, a new Laboratory building for the Schools of Dentistry and Pharmacy, and a new Law School building. Full descriptions of these parts of the University equipment are found in the chapters devoted to the Baltimore Schools in Section II.

A new University Hospital, at the corner of Greene and Redwood Streets, containing 400 beds and providing fine clinical facilities, was completed in November, 1934.

Libraries

Libraries are maintained at both the College Park and the Baltimore branches of the University.

The Library Building at College Park houses the executive offices, post-office, and students' supply store. The building is well equipped and well lighted. The reading room on the second floor has seats for 236, and about 4,500 reference books and periodicals on open shelves, the other books being kept in the stack room and three seminar rooms. The stack room is equipped with five tiers of metal stacks and 18 cubicles for advanced study. About 5,500 of the 56,000 books on the campus are shelved in the Engineering, Chemistry, and Entomology Departments, the Graduate School, and other units.

The Library facilities in Baltimore for the School of Medicine are housed in Davidge Hall; those for the Schools of Dentistry and Pharmacy and the courses in Arts and Sciences are located in the Dentistry and Pharmacy Building; and those for the School of Law are in the new Law Building.

The libraries, main and departmental, contain a total of 97,995 bound volumes, and large collections of unbound journals. In the two central libraries there are approximately 12,000 United States Government documents, unbound reports, and pamphlets.

Through the Inter-library Loan Systems of the Library of Congress, the United States Department of Agriculture, and other Government Libraries in Washington, the University Library is able to supplement its reference material, either by arranging for personal work in these Libraries or by borrowing books from them.

ENTRANCE

All communications regarding entrance should be addressed to the Director of Admissions. Those pertaining to entrance to the College Park Colleges should be addressed to the University of Maryland, College Park,

Maryland; those pertaining to the Baltimore Schools, to the University of Maryland, Lombard and Greene Streets, Baltimore, Maryland.

Age of Applicants. A student who is less than sixteen years of age must have his residence with parents or guardians.

Entrance Preliminaries. Candidates for admission should apply as early as possible for the necessary forms for the transfer of preparatory credits. After these forms have been filled out by the applicant and the high school principal, they should be returned to the Director of Admissions. It is advisable for prospective students to attend to this matter as early as possible after graduation from high school, in order to make sure that the units offered are sufficient and acceptable. The Director of Admissions is always glad to advise with students, either by correspondence or in person, concerning their preparation. A general statement of the procedure to follow after they are duly admitted to the University is sent out to new students.

Time of Admission. Applicants for admission should plan to enter at the beginning of the school year in September. It is possible, however, to be admitted to certain colleges at the beginning of either semester.

Registration. Registration for the first semester, except for new students, takes place at the end of the second semester of the preceding year. Students register for the second semester during the week preceding final examinations of the first semester.

Late Registration. Students who do not complete their registration and classification on regular registration days will be required to pay \$3.00 extra on the day following the last registration day and \$5.00 extra thereafter. Students who fail to file course cards in the specified periods in May and January are considered late registrants.

After seven days from the opening of a semester, a fee is imposed for a change of registration.

Students who, for any reason, are more than ten days late in registering must secure permission from the instructors in charge for admission to courses. Such permission must be given in writing to the student's dean before course cards will be issued.

Freshman Registration. Registration of freshmen for the first semester will take place Thursday of the opening week. All freshmen are expected to register at this time.

Dormitories will be ready for occupancy by freshmen ~~Wednesday~~ ^{Sunday} of the opening week.

A special freshman program is planned covering the time between registration day and the beginning of the instruction schedule, the object of which is to complete the organization of freshmen so that they may begin the regular work promptly and effectively, and to familiarize them with their new surroundings.

ADMISSION FROM SECONDARY SCHOOLS. REQUIREMENTS AND METHODS.

An applicant from a secondary school may be admitted either by certificate or by examination.

Admission by Certificate: For admission by certificate an applicant must be a graduate of a secondary school which is approved either by the Maryland State Board of Education or by an accrediting agency of equal rank. Such applicant must have completed at least fifteen units of preparatory work. A unit represents a year's study in any subject in a secondary school, and constitutes approximately one-fourth of a full year's work. It presupposes a school year of 36 to 40 weeks, recitation periods of from 40 to 60 minutes, and for each study four or five class exercises a week. Two laboratory periods in any science or vocational study are considered as equivalent to one class exercise. Normally, not more than three units are allowed for four years of English. If, however, a fifth course has been taken, an extra unit will be allowed.

An applicant for admission by certificate from a preparatory school not located in Maryland or the District of Columbia must be recommended by his high school principal, and must attain the college recommendation grade of his school, or, if his school has no college recommendation grade, an average in his high school work at least ten per cent higher than the lowest passing grade.

The additional and special requirements for admission to the various undergraduate curricula, the professional schools, and the Graduate School are given in detail in the Tabular Summary of Subject Matter Requirements for Entrance, or in chapters devoted to these schools.

Admission by Examination: An applicant from a secondary school who is not eligible for admission by certificate may seek entrance through either of two types of examination. (1) He may appeal to the Director of Admissions for permission to report at the University for college aptitude tests, which will be used in addition to the preparatory school record in determining whether the applicant shall be admitted to the University. (2) He will be admitted upon presenting evidence of having passed, satisfactorily, examinations in the subjects required for graduation from an accredited secondary school. Such examinations are offered in various parts of the country by the College Entrance Examination Board, with headquarters at 431 West 117th St., New York City. Examinations are offered also by Regents of the University of the State of New York and by the Department of Public Instruction of the State of Pennsylvania. College Entrance Board examinations must be passed with a grade of 60. New York Regents and Pennsylvania examinations must be passed with a grade of 75.

Tabular Summary of Subject Matter Requirements for Entrance

The University offers undergraduate curricula as follows:

| | |
|------------------------------|----------------------------|
| Agricultural Economics—A | Home Economics Education—B |
| Animal Husbandry—A | Home Economics Extension—B |
| Arts—Nursing—A | Industrial Education—A |
| Arts—Law—A | Institution Management—B |
| Arts and Science Education—A | Landscape Gardening—A |
| Bacteriology and Pathology—A | Mathematics—C |
| Biological Science—A | Mechanical Engineering—C |
| Botany—A | Modern Language—A |
| Business Administration—A | Olericulture—A |
| Civil Engineering—C | Pomology—A |
| Crops—A | Physical Education—A |
| Commercial Education—E | Physical Science—A |
| Dairy Manufacturing—A | Physics—C |
| Dairy Production—A | Plant Pathology—A |
| Economics—A | Political Science—A |
| Electrical Engineering—C | Poultry Husbandry—A |
| English—A | Pre-Dentistry—A |
| Entomology—A | Pre-Medicine—D |
| Floriculture—A | Rural Education—A |
| Foods—B | Sociology—A |
| General Agriculture—A | Soils—A |
| General Chemistry—A | Textiles and Clothing—B |
| General Home Economics—B | Zoology—A |
| History—A | |

Letters following curricula refer to entrance requirement captions presented in the following table.

The requirements for admission to the foregoing curricula are indicated in the following table, the requirements for a specific curriculum being given in that column headed by the letter which follows the name of the curriculum in the foregoing list.

| | A | B | C | D | E |
|-----------------------|----|---|------|---|---|
| English | 3 | 3 | 3 | 3 | 3 |
| Algebra | 1 | | **2 | 1 | 1 |
| Plane Geometry..... | *1 | | 1 | 1 | |
| Solid Geometry..... | | | **1½ | | |
| Mathematics | | 2 | | | |
| History | 1 | 1 | 1 | 1 | 1 |
| Science | 1 | 1 | 1 | 1 | 1 |
| Foreign Language..... | | | | 2 | |
| Stenography | | | | | 2 |
| Typewriting | | | | | 1 |
| Bookkeeping | | | | | 1 |
| Electives | 8 | 8 | 6½ | 6 | 5 |

*In the College of Agriculture, with the exception of those curricula which include trigonometry, a second unit of any mathematics may be substituted for the requirement in plane geometry, provided the applicant ranks in the upper two-thirds of his high school class.

**Students who do not offer entrance units in algebra, completed, and in solid geometry, may enter the Engineering College, but will be obliged, during the first semester, to take courses which will make up the unit in algebra, completed, and one-half unit in solid geometry, and then they may enter upon the regular freshman mathematics at the beginning of the second semester. The work of the second semester freshman mathematics will be offered these students in the summer session.

Conditions: A student who is eligible to enter the University, but who cannot meet specific requirements for admission to the curriculum of his choice, may enter without regular classification and transfer to the specific curriculum as soon as his deficiencies shall have been removed.

ADMISSION BY TRANSFER FROM OTHER COLLEGES OR UNIVERSITIES

A candidate for admission by transfer from another college or university must present evidence that he has maintained a satisfactory and honorable record at the institution which he has attended.

For admission by transfer the applicant should file with the Director of Admissions as soon as possible after the close of the school year in June, an application for admission made out on the blank form furnished by the University. In addition, he should have the institution he has attended furnish a complete official transcript of his record, including the secondary school record and a statement of honorable dismissal.

Advanced Standing

Advanced standing is granted to students transferring from institutions of collegiate rank for work completed which is equivalent in extent and quality to the work of the University of Maryland, subject to the following provisions:

- (1) Regardless of the amount of advanced standing a student may secure, in no case will he be given the baccalaureate degree with less than one year of resident work.
- (2) Regardless of the amount of advanced standing a student may secure, in no case will he be given the baccalaureate degree until he shall have satisfied the full requirements of the curriculum he may elect.
- (3) In case the character of a student's work in any subject is such as to create doubt as to the quality of that which preceded it elsewhere, the University reserves the right to revoke at any time any credit allowed.
- (4) Credit will not be allowed for more than one-fourth of those courses in which the grade is the lowest passing grade of the college attended.
- (5) An applicant may request examination for advanced credit in any subject in keeping with requirements prescribed by the University.

UNCLASSIFIED STUDENTS

Students at least twenty-one years of age who have had insufficient preparation to be admitted to any of the four-year curricula may register, with the consent of the Director of Admissions, for such subjects as they appear fitted to take. So long, however, as a student remains unclassified, he is ineligible to matriculate for a degree. One may attain regular classification at any time by satisfying the entrance requirements.

REQUIREMENT IN MILITARY INSTRUCTION

All male students, if citizens of the United States, whose bodily condition indicates that they are physically fit to perform military duty are required to take military training for a period of two years, as a prerequisite to graduation.

Graduation Requirements for Students Excused from Military Instruction and Physical Education

Students excused from basic military training or physical education without academic credit shall be required to take an equivalent number of credits in other subjects, so that the total credits required for a degree in any college shall not be less than 127 hours. The substitution must be approved by the dean of the college concerned.

REQUIREMENTS IN PHYSICAL EDUCATION FOR WOMEN

All women students whose bodily condition indicates that they are physically fit for exercise are required to take physical education for a period of two years, as a prerequisite to graduation.

HEALTH SERVICE

PHYSICAL EXAMINATIONS

As soon as possible after the opening of the fall semester, as a measure for protecting the general health, all students who enter the undergraduate colleges at College Park are given a physical examination. The examination of the men students is conducted by the University Physician in cooperation with the Physical Education and Military Departments.

The examination of women students is conducted by a woman physician in cooperation with the office of the Dean of Women and the office of Physical Education for Women. The woman physician has her offices in the Girls' Field House. She is available for consultation by all women students at hours to be arranged.

INFIRMARY RULES

1. All undergraduate students may receive dispensary service and medical advice by reporting at the Infirmary during regular office hours established by the physician in charge.

Office hours every day at 8 to 9 o'clock in the morning except on Sundays. Evening office hours every day at 6 to 6:30 except Saturday and Sunday. Office hours on Sunday by appointment only.

2. A registered nurse is on duty at all hours at the Infirmary.

Between the hours of 2 and 4 in the afternoon, quiet hour is observed. During this time students are requested not to report except in case of an emergency.

3. Students not living in their own homes who need medical attention and who are unable to report to the Infirmary should call one of the University physicians. Such visits will be free of charge except in cases where additional visits are necessary. For such additional visits as may be

necessary, the University physician will make his usual charge. But, if a student so desires, he may call a physician of his own choice and at his own expense.

4. Students not residing in their own homes may, upon the order of the University physician, be cared for in the Infirmary to the extent of the facilities available. Students who live off the campus will be charged a fee of two dollars a day.

5. The visiting hours are 4 to 5 and 7 to 8 p. m. daily. No visitor may see any patient until permission is granted by the nurse in charge.

6. Hospitalization is not available at the Infirmary for graduate students and employees. Dispensary service, however, is available for graduate students and employees who are injured in University service or University activities.

7. For employees of the University who handle food and milk, the University reserves the right to have its physician make physical examinations, and such inspections of sanitary conditions in homes as in the opinion of the University physician, may be desirable.

8. Students living in the dormitories who are unable to attend classes because of illness or who are unable to report to the Infirmary should report to their dormitory matrons, who will notify the Infirmary immediately.

9. Students who are ill in their homes, fraternity houses, or dormitories and wish a medical excuse for classes missed during the time of illness must present written excuses from their physicians, parents, or house mothers. These excuses will be approved by the University physicians or nurse.

REGULATIONS, GRADES, DEGREES

REGULATION OF STUDIES

Course Numbers. Courses for undergraduates are designated by numbers 1—99; courses for advanced undergraduates and graduates, by numbers 100—199; and courses for graduates, by numbers 200—299.

The letter following the number of a course indicates the semester in which it is offered; thus, course 1f is offered in the first semester; 1s, in the second semester. The letter "y" indicates a full-year course. The number of hours' credit for each course is indicated by the arabic numeral in parentheses following the title of the course. No credit is allowed for a "y" course until it is completed.

Schedule of Courses. A semester time schedule of courses, giving days, hours, and rooms, is issued as a separate pamphlet at the beginning of each semester. Classes are scheduled beginning 8:20 A. M.

Definition of Credit Unit. The semester hour, which is the unit of credit in the University, is the equivalent of a subject pursued one period a week for one semester. Two or three periods of laboratory or field work are equivalent to one lecture or recitation period. The student is expected to devote three hours a week in classroom or laboratory or in outside preparation for each credit hour in any course.

Number of Hours. The normal student load is from 15 to 19 semester hours, according to curriculum and year. These variations are shown in the appropriate chapters in Section II describing the several divisions of the University. No student may carry either more or less than the prescribed number of hours without specific permission from the dean of his college.

EXAMINATIONS AND GRADES

Examinations. Examinations are held at the end of each semester in accordance with the official schedule of examinations. Students are required to use the prescribed type of examination book in final examinations; and in tests, when requested to do so by the instructor.

Final examinations are held in all courses except in classes where the character of the work will permit the instructor to note frequently the progress and proficiency of the student—in which case they may be omitted upon approval of the head of the department and dean of the college. Periodic examinations and tests are given during regularly scheduled class periods. Final examinations, where required, are given according to schedule and are of not more than three hours' duration each.

Grading. The system of grading is uniform in the different departments and divisions of the University.

The following grade symbols are used: A, B, C, D, E, F, and I. The first four, A, B, C, and D, are passing; E, condition; F, failure; I, incomplete.

Grade A denotes superior scholarship; grade B, good scholarship; grade C, fair scholarship; and grade D, passing scholarship.

A student who receives the grade D in more than one-fourth of the credits required for graduation must take additional courses or repeat courses until he has the required number of credits for a degree, three-fourths of which carry a grade above D. A student is not permitted to repeat a course to raise a D grade after a lapse of two years.

In the case of a candidate for a combined degree or of a transfer student with advanced standing, a grade of D will not be recognized for credit towards a degree in more than one-fourth of the credits earned at this institution.

A student with the grade of E is conditioned in the course. The grade of E will be changed by a reexamination during the succeeding semester to D or F. The grade cannot be raised to a grade higher than D. Only one reexamination is permitted, and if a student does not remove the condition at the time scheduled for this reexamination the condition becomes a failure. No student is permitted to take a reexamination to remove a condition within four weeks after the condition has been acquired.

The mark I (Incomplete) is exceptional, and is given only to a student whose work has been qualitatively satisfactory and who has a proper excuse for not having completed the requirements of the course. In case of a student whose work has been unsatisfactory and who is absent from the final examination, the grade will be E or F, in accordance with the character of the previous work. In cases where the mark I is given the

student must complete the work assigned by the instructor by the end of the first semester in which that subject is again offered, or the grade becomes F.

Work of grade D, or of any passing grade, cannot be raised to a higher grade except by repeating the course. This must be done within a period of two years after the course was originally taken. A student who repeats a course for which he has received credit for work done at this University or elsewhere, must meet all the requirements of the course, including regular attendance, laboratory work, and examinations. His final grade will be substituted for the grade already recorded, but he will not receive any additional credit for the course.

REPORTS

Written reports of grades are sent by the Registrar to parents or guardians at the close of each semester.

ELIMINATION OF DELINQUENT STUDENTS

The University reserves the right to request at any time the withdrawal of a student who cannot or does not maintain the required standard of scholarship, or whose continuance in the University would be detrimental to his or her health, or to the health of others, or whose conduct is not satisfactory to the authorities of the University. *Students of the last class may be asked to withdraw even though no specific charge be made against them.*

JUNIOR STANDING

No student will be certified as a junior, or be permitted to select a major or minor, or to continue in a fixed curriculum until he or she shall have passed with an average grade of C the minimum number of semester credits required for junior standing in any curriculum. (This regulation is effective beginning with the class entering in September, 1935.)

Students in the College of Engineering who have grades of D in the second semester of either sophomore physics or mathematics cannot register in junior engineering subjects until those grades are raised to C or better.

DEGREES AND CERTIFICATES

The University confers the following degrees: Bachelor of Arts, Bachelor of Science, Master of Arts, Master of Science, Doctor of Philosophy, Civil Engineer, Mechanical Engineer, Electrical Engineer, Bachelor of Laws, Doctor of Medicine, Doctor of Dental Surgery, and Bachelor of Science in Pharmacy. *Nursing.*

Students in the two-year and three-year curricula are awarded certificates.

The requirements for graduation vary according to the character of work in the different colleges and schools. For full information regarding the requirements for graduation in the several colleges consult the appropriate chapters in Section II.

No baccalaureate degree will be awarded to a student who has had less than one year of resident work in this University. The last thirty credits of

any curriculum leading to a baccalaureate degree must be taken in residence at the University of Maryland.

At least three-fourths of the credits required for graduation must be earned with grades of A, B, and C.

In the case of a candidate for a combined degree or of a transfer student with advanced standing, a grade of D will not be recognized for credit towards a degree in more than one-fourth of the credits earned at this institution.

Each candidate for a degree must file in the office of the Registrar before March 1st of the year in which he expects to graduate, a formal application for a degree.

EXPENSES

MAKE ALL CHECKS PAYABLE TO THE UNIVERSITY OF MARYLAND FOR THE EXACT AMOUNT OF THE SEMESTER CHARGES.

In order that the cost of operation may be reduced, all fees are due and payable as a part of the student's registration, and all persons must come prepared to pay the full amount of the semester charges. No student will be admitted to classes until such payment has been made.

EXPENSES AT COLLEGE PARK

The University reserves the right to make such changes in fees and other costs as any occasion may make necessary. Such changes, however, in comparison with the total cost to the student would be only nominal.

FEES FOR UNDERGRADUATE STUDENTS

Maryland

| | First Semester | Second Semester | Total |
|-------------------------------|-----------------|-----------------|-----------------|
| Fixed Charges | \$67.50 | \$67.50 | \$135.00 |
| Athletic Fee | 15.00 | ..... | 15.00 |
| *Special Fee | 10.00 | ..... | 10.00 |
| **Student Activities Fee..... | 10.00 | ..... | 10.00 |
| Infirmary Fee | 3.00 | ..... | 3.00 |
| Post Office Box..... | 2.00 | ..... | 2.00 |
| | <u>\$107.50</u> | <u>\$67.50</u> | <u>\$175.00</u> |

District of Columbia

| | First Semester | Second Semester | Total |
|--------------------------------|-----------------|-----------------|-----------------|
| General Fees listed above..... | \$107.50 | \$67.50 | \$175.00 |
| Non-Resident Fee | 25.00 | 25.00 | 50.00 |
| | <u>\$132.50</u> | <u>\$92.50</u> | <u>\$225.00</u> |

* This fee, established by special request of the Student Government Association for a period of eight years, beginning Sept. 1, 1930, was for the purpose of further improving the University grounds and the physical training facilities. The income now being derived from it is used to amortize bonds issued by the Athletic Board for the purpose of constructing Ritchie Coliseum.

** The Student Activities Fee is included at the request of the Student Government Association. Its payment is not mandatory, but it is really a matter of economy to the student, since it covers subscription to the student weekly paper, the literary magazine, and the year book; class dues, including admission to class dances; and admission to the performances of the musical and dramatic clubs.

Other States and Countries

| | First Semester | Second Semester | Total |
|------------------------|-----------------|-----------------|-----------------|
| General Fee | \$107.50 | \$ 67.50 | \$175.00 |
| Non-Resident Fee | 62.50 | 62.50 | 125.00 |
| | <u>\$170.00</u> | <u>\$130.00</u> | <u>\$300.00</u> |

Special Fees

| | |
|--|---------|
| Matriculation Fee, payable on first entrance..... | \$ 5.00 |
| Diploma Fee for bachelor's degree..... | 10.00 |
| Certificate Fee for Teacher's Diploma and other certificates where required each | 5.00 |
| Pre-Medical and Pre-Dental Fee—Per semester in addition to fees shown above: | |

| | |
|---------------------------------|---------|
| Maryland | \$25.00 |
| District of Columbia..... | 25.00 |
| Other States and Countries..... | 62.50 |

Expenses of Students Living in Dormitories

| | First Semester | Second Semester | Total |
|---------------|-----------------|-----------------|-----------------|
| Board | \$135.00 | \$135.00 | \$270.00 |
| Lodging | 38.00 | 38.00 | 76.00 |
| | <u>\$173.00</u> | <u>\$173.00</u> | <u>\$346.00</u> |

Laboratory Fees Per Semester Course

| | |
|---|--------------------------------------|
| Bacteriology | Industrial, Inorganic, and |
| General, Pathological Technique, Hematology and | Physical Chemistry |
| Urinalysis | All other courses in Chemistry |
| Pathogenic and Serology..... | Experimental Psychology |
| All other courses..... | Home Economics: Foods..... |
| Botany | Zoology |
| | |

Miscellaneous Fees

| | |
|--|---------------|
| Late Registration Fee..... | \$3.00-\$5.00 |
| Fee for each change in registration after first week..... | \$1.00 |
| Fee for failure to file schedule card in Registrar's Office during first week of semester..... | \$1.00 |
| Absence Fee twenty-four hours before or after holiday..... | \$3.00 |
| Condition Examination Fee..... | \$1.00 |
| Special Examination Fee..... | \$5.00 |
| Fee for failure to report for medical examination appointment..... | \$2.00 |
| Part-time students carrying six semester hours or less—per semester credit hour | \$6.00 |
| Laundry service, when desired—per semester..... | \$13.50 |

Students will be charged for wilful damage to property. Where responsibility for the damage can be fixed, the individual student will be billed for it; where it cannot, the entire student body will be charged a flat fee to cover the loss or damage.

Fees For Graduate Students

| | |
|--|---------|
| Matriculation Fee | \$10.00 |
| Fee for each semester credit hour..... | 4.00 |
| Diploma Fee—Master's Degree..... | 10.00 |
| Graduation Fee—Doctor's Degree..... | 20.00 |

EXPLANATIONS

The Fixed Charges made to all students cover a part of the overhead expenses not provided for by the State.

The Board, Lodging, and Laundry charge may vary from semester to semester, but every effort will be made to keep expenses as low as possible.

Fees for Students Entering in February. Students entering the University for the second semester are charged the following fees for the items indicated: Athletic, \$7.50; Special, \$5.00, and Student Activities, \$8.00.

Fees for Part-Time Students. Undergraduate students carrying six semester hours or less of regularly scheduled courses are charged \$6.00 per semester credit and regular laboratory fees. Students carrying seven or more semester hours are charged the regular fees. In the case of special courses with special fees this rule does not apply. A matriculation fee of \$5.00 is charged at the first registration.

The Athletic Fee constitutes a fund which is collected from all students in the University at College Park for the maintenance of athletics, and the entire amount is turned over to the Athletic Director for disbursement. This fund is audited annually by the State Auditors.

Late Registration Fee. Students who do not complete their registration and classification on regular registration days will be required to pay \$3.00 extra on the day following the last registration day, and \$5.00 thereafter. Students who fail to file course cards in the specified periods in May and January are considered late registrants.

Absence Fee. In cases of absence during a period beginning 24 hours before the close of classes for a vacation or holiday and ending 24 hours after the resumption of classes, a student will be penalized by being required to pay a special fee of \$3.00 for each class missed. Unless properly excused, students will be penalized, as in the case of a holiday, for absence from the first meeting of each class at the beginning of the second semester.

Students desiring to be excused from classes before and after a holiday must make application to the Dean at least one week before such holiday. Except under the conditions specified, no excuse for an absence before or after a holiday will be granted.

In exceptional cases, such as sickness or death in the family, application for an excuse must be made within one week after a student returns.

DEFINITION OF RESIDENCE AND NON-RESIDENCE

Students who are minors are considered to be resident students, if at the time of their registration their parents* have been residents of this State† for at least one year.

Adult students are considered to be resident students, if at the time of their registration they have been residents of this State† for at least one year; provided such residence has not been acquired while attending any school or college in Maryland.

The status of the residence of a student is determined at the time of his first registration in the University, and may not thereafter be changed by him unless, in the case of a minor, his parents* move to and become legal residents of this State†, by maintaining such residence for at least one full calendar year. However, the right of the student (minor) to change from a non-resident to a resident status must be established by him prior to registration for a semester in any academic year.

MISCELLANEOUS INFORMATION

In case of illness requiring a special nurse or special medical attention, the expense must be borne by the student.

Students not rooming in the dormitories may obtain board and laundry at the University at the same rates as those living in the dormitories.

Day students may get lunches at the University cafeteria or at nearby lunch rooms.

The costs of books and supplies and personal needs will vary according to the tastes and habits of the individual student. Books and supplies average about \$40.00 per year.

No diploma will be conferred upon, nor any certificate granted to a student who has not made satisfactory settlement of his account.

DORMITORY RULES AND REGULATIONS

Room Reservations. All new students desiring to room in the dormitories should request room reservation cards. Men should apply to the Dormitory Manager; women to the Office of the Dean of Women. When the room reservation card is returned, it must be accompanied by a \$5 deposit. This fee will be deducted from the first semester charges when the student registers; if he fails to register, the fee will be forfeited. Reservations by students already at the University may be made at any time during the closing month of the school year.

Men's Dormitories. The office of the Dormitory Manager is located in "A" Section, Calvert Hall. After the student has been officially admitted and has paid his bill, he will be able to receive his room key and take pos-

* The term "parents" includes persons who, by reason of death or other unusual circumstances, have been legally constituted the guardians of and stand in loco parentis to such minor students.

† Students in the College Park Colleges who are residents of the District of Columbia are charged two-fifths of the non-resident fee charged to other non-residents.

session of his room. Instructions regarding rules for the dormitories will be given to the student at this time.

Students are requested to obtain their room assignments before 7 P. M. on the day they enter.

Women's Dormitories. All women students who have made dormitory reservations should report to the dormitory to which they have been assigned. Instructions regarding rules and regulations and any other information desired by the student will be given by the house mother on duty.

Personal baggage sent via the American Express and marked for the dormitory to which it is to be sent will be delivered there direct. All baggage coming by railway will be deposited at the railway station in College Park, whence it can be secured for a small charge through arrangements made at the General Service Department of the University.

Keys. A deposit of \$1.00 is required for each key. Each student is required to have a key for his room in the dormitory.

men **Equipment.** *men* Each student assigned to a dormitory should provide himself with sufficient single blankets, at least two pairs of single sheets, a pillow, pillow cases, towels, a laundry bag, and a waste basket.

All dormitory property assigned to the individual student will be charged against him, and he must assume responsibility for its possession without destruction other than that which may result from ordinary wear and tear.

Maid service is furnished without charge for all rooms.

X All freshmen students, except those who live at home, are required to room in the dormitories and board at the University dining hall.
only men.

WITHDRAWALS

Students registering for the dormitories and dining hall must continue for the year, as contracts for faculty and other service and for supplies are made on an annual basis, and fees are fixed on the supposition that students will remain for the entire year.

A student desiring to withdraw from the University must secure the written consent of the parent or guardian, to be attached to the withdrawal slip, which must be approved by the Dean and presented to the Registrar at least one week in advance of withdrawal. Charges for full time will be continued against him unless this is done. The withdrawal slip must bear the approval of the President before being presented to the Cashier for refund.

REFUNDS

For withdrawal within five days full refund is made of fixed charges, athletic fee, special fee, and student activities fee, with a deduction of \$5.00 to cover cost of registration. All refunds for board, lodging, and laundry are pro-rated.

After five days, and until November 1, the first semester, or March 10, the second semester, refunds on all charges will be pro-rated, with a deduction of \$5.00 to cover cost of registration.

After November 1, or March 10, refunds are granted for board and laundry only, amounts to be pro-rated.

No refunds are made without the written consent of the student's parent or guardian, except to students who pay their own expenses.

No student is given cash for any part of his or her refund until all outstanding checks have been honored by the banks on which they are drawn.

EXPENSES AT BALTIMORE

The fees and expenses for the professional schools located in Baltimore will be found in the section of this catalogue pertaining to the several schools in Baltimore.

STUDENT EMPLOYMENT

A considerable number of students earn some money through employment while in attendance at the University. No student should expect, however, to earn enough to pay all his expenses. The amounts vary, but some earn from one-fourth to three-fourths of all the required funds.

Generally the first year is the hardest for those desiring employment. After one has demonstrated that one is worthy and capable, there is much less difficulty in finding work.

During the past two and a half years, through the National Youth Administration, the University has been enabled to offer needy students a limited amount of work on special projects, the remuneration for which averages about \$15 monthly. It is not known how long the Government will continue to extend this aid.

The University assumes no responsibility in connection with employment. It does, however, maintain a bureau to aid needy students. The nearby towns and the University are canvassed, and a list of available positions is placed at the disposal of the students.

SCHOLARSHIPS AT COLLEGE PARK

The Board of Regents awards a limited number of scholarships annually. A faculty committee reviews the applications and makes recommendations as to the awards. These recommendations are made to the President, and appointments are subject to the approval of the Board of Regents.

All applications must be filed on a blank form furnished by the University, and no applicant will be awarded a scholarship until after he or she has had a physical examination given by the University of Maryland Department of Health.

Applicants may be requested to appear before the faculty committee for a personal interview.

The faculty committee, in its consideration of applicants, holds as a primary factor the apparent capacity of the applicant for leadership.

The scholarship holders are appointed on a yearly basis, but reappointment may be made in any case in which the student proves worthy.

The scholarship exempts the holder from payment of fixed charges

(\$135.00) and from non-resident fees, wherever such fees are applicable. Board and lodging and all other expenses, including laboratory and other fees, must be paid by the student holding a scholarship. These charges, payable after the scholarship allowance has been deducted, amount to a little more than \$400.00 per year for a boarding student. No scholarships covering board and lodging are awarded.

Applications should be sent to the Chairman, Faculty Committee on Scholarships, College Park, Md.

HONORS AND AWARDS

SCHOLARSHIP HONORS AND AWARDS

Scholarship Honors. Final honors for excellence in scholarship are awarded to one-fifth of the graduating class in each college. *First honors* are awarded to the upper half of this group; *second honors* to the lower half.

The Goddard Medal. The James Douglas Goddard Memorial Medal is awarded annually to the man from Prince George's County who makes the highest average in his studies and who at the same time embodies the most manly attributes. The medal is given by Mrs. Anne K. Goddard James, of Washington, D. C.

Sigma Phi Sigma Medal. The Delta Chapter of Sigma Phi Sigma Fraternity offers annually a gold medal to the freshman who makes the highest scholastic average during the first semester.

Alpha Zeta Medal. The Honorary Agricultural Fraternity of Alpha Zeta awards annually a medal to the agricultural student in the freshman class who attains the highest average record in academic work. The mere presentation of the medal does not elect the student to the fraternity, but simply indicates recognition of high scholarship.

Dinah Berman Memorial Medal. The Dinah Berman Memorial Medal is awarded annually to the sophomore who has attained the highest scholastic average of his class in the College of Engineering. The medal is given by Benjamin Berman.

Mortar Board Cup. Offered to the woman member of the senior class who has been in attendance at least three full years, and who has made the highest scholastic average.

Delta Delta Delta Medal. The sorority awards a medal annually to the girl who attains the highest average in academic work during the sophomore year.

American Institute of Chemists Medal. The American Institute of Chemists awards annually a medal and a junior membership to the graduating student, of good character and personality, majoring in chemistry, who shall have attained the highest average grade in this major subject for the entire undergraduate course, exclusive of credit received for the final semester.

MILITARY AWARDS

The Governor's Cup. Offered each year by His Excellency, the Governor of Maryland, to the best drilled company.

Military Faculty Award. The Military faculty of the University presents an award to the student who has done most for the Reserve Officers' Training Corps.

Class of '99 Gold Medal. The Class of 1899 offers each year a gold medal to the member of the battalion who proves himself the best drilled soldier.

Company Saber. The Military Department awards annually to the captain of the best drilled company of the University a silver mounted saber.

The Alumni Cup. The Alumni offer each year a cup to the commanding officer of the best drilled platoon.

Scabbard and Blade Saber. This saber is offered for the commander of the winning platoon.

Scabbard and Blade Medals. These medals are offered for the freshman students who remain longest in the individual competition, one per battalion.

Gold Medals. Offered by the Military Department to the two students who contribute the most to the success of the band. Gold Medals are offered also to the members of the best drilled squad. Gold Medals are likewise presented by the Department to the respective battalion commanders.

A Silver Medal is presented by the Military Department to the student who makes the highest score in the Third Corps Area Match.

A Bronze Medal is similarly awarded to the student making the second highest score in the Third Corps Area Match.

A Gold Medal is awarded to the member of the Varsity R. O. T. C. Rifle Team who fired the high score of the season.

A Gold Medal is awarded to the member of the Freshman Rifle Team who fired the high score of the season.

LOANS

Sigma Delta Loan
The Kappa Kappa Gamma Sorority offers annually a loan of one hundred dollars, without interest, to a woman student registered in the University of Maryland and selected by the Scholarship Committee—the said Committee to be composed of the deans of all Colleges in which girls are registered, including the Dean of Women and the Dean of the Graduate School.

A. A. U. W. Loan. The College Park Branch of the American Association of University Women offers annually a loan of one hundred dollars to a woman student of junior or senior standing who has been in attendance at the University of Maryland for at least one year. Awards are made on the basis of scholarship, character, and financial need. Applications should be made to the Scholarship Committee of the A. A. U. W.

PUBLICATIONS AWARDS

Medals are offered in Diamondback, Terrapin, and Old Line work, for the students who have given most efficient and faithful service throughout the year.

ATHLETIC AWARDS

Silvester Watch for Excellence in Athletics. The Class of 1908 offers annually to "the man who typified the best in college athletics" a gold watch. The watch is given in honor of a former President of the University, R. W. Silvester.

Maryland Ring. The Maryland Ring is offered by Charles L. Linhardt to the Maryland man who is adjudged the best athlete of the year.

CITIZENSHIP AWARDS

Citizenship Prize for Men. A gold watch is presented annually by H. C. Byrd, a graduate of the Class of 1908, to the member of the senior class who, during his collegiate career, has most nearly typified the model citizen, and has done most for the general advancement of the interests of the University.

Citizenship Prize for Women. The Citizenship Prize is offered by Mrs. Albert F. Woods to the woman member of the senior class who, during her collegiate career, has most nearly typified the model citizen, and has done most for the general advancement of the interests of the University.

STUDENT ACTIVITIES

The following description of student activities covers those of the undergraduate divisions of College Park. The description of those in the Baltimore divisions is included in the appropriate chapters in Section II.

GOVERNMENT

Regulation of Student Activities. The association of students in organized bodies, for the purpose of carrying on voluntary student activities in orderly and productive ways, is recognized and encouraged. All organized student activities are under the supervision of the Student Life Committee, subject to the approval of the President. Such organizations are formed only with the consent of the Student Life Committee and the approval of the President. Without such consent and approval no student organization which in any way represents the University before the public, or which purports to be a University organization or an organization of University students, may use the name of the University in connection with its own name, or in connection with its members as students.

Student Government. The Student Government Association consists of the Executive Council, the Women's League, and the Men's League, and operates under its own constitution. Its officers are a President, a Vice-

President, a Secretary-Treasurer, President of Women's League and President of Men's League.

The Women's League handles all affairs concerning women students exclusively. It has the advisory cooperation of the Dean of Women.

The Men's League handles all matters pertaining to men students. It has the advisory cooperation of the Assistant in Student Activities.

The Executive Council performs the executive duties incident to managing student affairs, and works in cooperation with the Student Life Committee.

The Student Life Committee, a faculty committee appointed by the President, keeps in close touch with all activities and conditions, excepting classroom work, that affect the student, and, acting in an advisory capacity, endeavors to improve any unsatisfactory conditions that may exist.

A pamphlet entitled *Academic Regulations*, issued annually and distributed to the students in the fall, contains full information concerning student matters as well as a statement of the rules of the University.

Eligibility to Represent the University. Only students in good standing are eligible to represent the University in extra-curricular contests. No student while on probation may represent the University in such events as athletic contests, glee club concerts, dramatic performances, and debates.

Discipline. In the government of the University, the President and faculty rely chiefly upon the sense of responsibility of the students. The student who pursues his studies diligently, attends classes regularly, lives honorably, and maintains good behavior meets this responsibility. In the interest of the general welfare of the University, those who fail to maintain these standards are asked to withdraw. Students are under the direct supervision of the University only when on the campus, but they are responsible to the University for their conduct wherever they may be.

Fraternities and sororities, as well as all other clubs and organizations recognized by the University, are expected to conduct their social and financial activities in accordance with the rules of good conduct and upon sound business principles. Where such rules and principles are observed, individual members will profit by the experience of the whole group, and thereby become better fitted for their life's work after graduation. Rules governing the different activities will be found in the list of Academic Regulations.

SOCIETIES

Honorary Fraternities. Honorary fraternities and societies in the University at College Park are organized to uphold scholastic and cultural standards in their respective fields. These are Phi Kappa Phi, a national honorary fraternity open to honor students, both men and women, in all branches of learning; Sigma Xi, scientific fraternity; Alpha Zeta, a national honorary agricultural fraternity recognizing scholarship and student leadership; Tau Beta Pi, a national honorary engineering fraternity; Omicron Delta Kappa, men's national honor society, recognizing conspicuous attain-

ment in non-curricular activities and general leadership; Kappa Phi Kappa, a national educational fraternity; Beta Phi Theta, an honorary French fraternity; Sigma Delta Pi, a national honorary Spanish fraternity; Alpha Chi Sigma, a national honorary chemical fraternity; Scabbard and Blade, a national military society; Pershing Rifles, a national military society for basic course R. O. T. C. students; Pi Delta Epsilon, a national journalistic fraternity; Mortar Board, the national senior honor society for women; Alpha Lambda Delta, a national freshman women's honor society promoting scholarship; Theta Gamma, a local Home Economics society; Alpha Psi Omega (Iota Chapter), national dramatic society; and Chi Alpha, local women's journalistic fraternity.

Fraternities and Sororities. There are thirteen national fraternities and one local fraternity, and five national sororities and two local sororities at College Park. These in the order of their establishment at the University are Kappa Alpha, Sigma Phi Sigma, Sigma Nu, Phi Sigma Kappa, Delta Sigma Phi, Alpha Gamma Rho, Theta Chi, Phi Alpha, Tau Epsilon Phi, Alpha Tau Omega, Phi Delta Theta, Lambda Chi Alpha, and Alpha Lambda Tau (national fraternities); and Alpha Omicron Pi, Kappa Delta, Kappa Kappa Gamma, Delta Delta Delta, and Alpha Xi Delta (national sororities); and Sigma Alpha Mu (local fraternity), Beta Pi Sigma (local sorority), and Alpha Sigma (local club).

Clubs and Societies. Many clubs and societies, with literary, scientific, social, and other special objectives are maintained in the University. Some of these are purely student organizations; others are conducted jointly by students and members of the faculty. The list is as follows: Agricultural Council, Authorship Club, Bacteriological Society, Engineering Society, Entomological Society, Horticulture Club, Latin American Club, Live Stock Club, New Mercer Literary Society, Poe Literary Society, Calvert Forum, Women's Athletic Association, Girls' "M" Club, Footlight Club, Debating Club, Rosshourg Club, Mathematics Society, Economics Club, Chess Club, Strauss Club, DeMolay Club, Psyche Club, Der Deutsche Verein, Riding Club, Swimming Club, Opera Club, Poetry Club, International Relations, American Institute of Electrical Engineers, American Society of Civil Engineers, and Radio Club.

Student Grange. The Student Grange is a chapter of the National Grange. With the exception of two faculty advisers, the Student Grange membership is made up entirely from the student body. New members are elected by ballot when they have proved their fitness for the organization.

The general purposes of the Student Grange are to furnish a means through which students keep in touch with state and national problems of agricultural, economic, or general educational nature; to gain experience in putting into practice parliamentary rules; to learn the meaning of leadership, and to learn how to assume leadership that aids in the ultimate task of serving in one's community.

RELIGIOUS INFLUENCES

Staff. The University recognizes its responsibility for the welfare of the students, not only as intellectual, but as moral and spiritual beings. Student Pastors representing the major denominational bodies are officially appointed by the Churches for work with the students of their respective faiths. Each of the Student Pastors is also pastor of a local church of his denomination, which the students are encouraged to attend.

Religious Work Council. The Religious Work Council, comprising the President of the University, acting as Chairman, the Student Pastors, members of the Faculty, and students, focalizes, reviews, and stimulates the religious thought and activity of the student body. This Council has an executive secretary with an office in the Student Center, who is daily at the service of the students and the churches.

While there is no interference with any one's religion, religion itself is recognized, and every possible provision made that the student may keep in contact with the church of his choice.

Denominational Clubs. The Episcopal Club, the Lutheran Club, the Presbyterian Club, and the Baptist Club are active organizations of the students (both men and women) of their respective denominations, and their friends, banded together for mutual fellowship and Christian service.

The Maryland Christian Association. The Maryland Christian Association is a fellowship of students and teachers, both men and women, who unite for religious fellowship and service. The Association includes the Y. M. C. A. and the Y. W. C. A. of the University, and all students and teachers are invited to join and to participate in its activities. The Association renders a number of services upon the campus, such as welcoming and assisting new students, securing speakers, holding religious services, seminars, discussion groups, forums, and social functions. The Association also sponsors the Cosmopolitan Club, which seeks to welcome and to create fellowship between students at the University from foreign countries.

STUDENT PUBLICATIONS

Three student publications are conducted under the supervision of the Faculty Committee on Student Publications.

The Diamondback, a weekly, six-to-eight-page newspaper, is published by the students. This publication summarizes the University news, and provides a medium for discussion of matters of interest to the students and the faculty.

The Terrapin is the student annual published by the Junior Class. It is a reflection of student activities, serving to commemorate the principal events of the college year.

The Old Line is a comic magazine put out quarterly by the students.

ALUMNI

The alumni are organized into several units, which elect representatives to the Alumni Council, an incorporated body which manages all general alumni affairs. Different alumni units represent the School of Medicine, the School of Pharmacy, the School of Dentistry, the School of Law, and the School of Nursing, while the group of colleges at College Park are represented by one unit. This College Park unit is governed by a board made up of representatives of the various colleges located at College Park.

The Alumni Council is made up of elected representatives from the several units, with a membership of twenty-four. Each alumni unit in Baltimore elects two representatives to the Council; the alumni representing the College Park group of colleges elect twelve representatives.

SECTION II

Administrative Divisions

COLLEGE OF AGRICULTURE

HARRY J. PATTERSON, *Dean*

Agriculture is the primary pursuit of the human race, and permanent prosperity is in direct proportion to the producing capacity of the land. Land-Grant Colleges were founded to foster teaching of scientific agriculture.

The College of Agriculture has a two-fold purpose. On the one hand, it gives a liberal educational background in order that its graduates may live more satisfying lives, no matter what may be their eventual occupations. On the other hand, it trains men and women for the various occupations based upon those sciences which are fundamental to agriculture. With this training, some will find occupation as scientific specialists, others will engage in business and professional pursuits having close agricultural contacts, while others will take up practical farming.

Agriculture is constantly changing; no cropping system can be worked out once and for all time; new as well as old pests and diseases must be constantly combated; better feeding and breeding of live stock, and efficient marketing methods must be substituted for inefficient methods if agriculture is to maintain its position with the other industries. Above all, agriculture must be made profitable to the tiller of the soil, and must be established as a paying business for those who engage in it.

The curricula of the College of Agriculture are planned to give the student thorough and practical instruction in agriculture and related sciences, and at the same time afford him an opportunity to specialize along the lines in which he is particularly interested.

Departments

The College of Agriculture includes the following departments: Agricultural Economics; Agronomy (including Crops and Soils); Animal Husbandry; Bacteriology; Botany; Dairy Husbandry; Entomology and Bee Culture; Farm Forestry; Farm Management; Farm Mechanics; Genetics and Statistics; Horticulture (including Pomology, Vegetable Gardening, Landscape Gardening, and Floriculture); Plant Pathology; Plant Physiology and Bio-chemistry; Poultry Husbandry.

Admission

The requirements for admission are discussed under Entrance, in Section I.

Requirements for Graduation

One hundred and twenty-eight semester hours are required for graduation. The detailed requirements for each department are included in the discussion of Curricula in Agriculture.

Farm and Laboratory Practice

The head of each department will help to make available opportunities for practical or technical experience along his major line of study for each student whose major is in that department and who is in need of such experience. For inexperienced students in many departments this need may be met by one or more summers spent on a practical farm.

Student Organizations

The students of the College of Agriculture maintain a Student Grange, an Agricultural Council, a Bacteriological Society, an Entomological Society, a Horticulture Club, a Livestock Club, and an honor fraternity, Alpha Zeta.

Membership and work in these is voluntary, and no college credits are given for work done in them; yet much of the training obtained in them is fully as valuable as that acquired from regularly prescribed courses.

The Student Grange represents the Great National Farmers' fraternity of the Order of Patrons of Husbandry, and emphasizes training for rural leadership. It sponsors much deputation work in local granges throughout the State. The Horticulture Club sponsors the Horticulture Show in the fall, and the Livestock Club, the Fitting and Showing Contest in the spring. Both of these exhibitions are creditable University functions. They give valuable training and inspiration to the students.

Alpha Zeta—National Agricultural Honor Fraternity

Membership in this fraternity is chosen from students in the College of Agriculture who have displayed agricultural motive and executive ability. This organization fosters scholarship, and to that end awards a gold medal to the member of the freshman class in agriculture who makes the highest record during the year.

Fellowships

A limited number of graduate fellowships, which carry remuneration of \$400 to \$800 yearly, are available to graduate students. The holders of these fellowships spend a portion of their time assisting in classes and laboratories. The rest of the time is used for original investigation or assigned study. (See Graduate School.)

Curricula in Agriculture

Curricula within the College of Agriculture divide into three general classes.

(1) Scientific curricula are designed to prepare students for positions as technicians, teachers, or investigators. These positions are usually in the various scientific and educational departments, or bureaus of the Federal,

State, or Municipal governments; in the various schools or experiment stations; or in the laboratories of private corporations.

(2) Technical curricula are designed to prepare students for farming as owners, tenants, managers, or specialists; for positions as county agricultural agents, or teachers of agriculture in high schools; as executives, salesmen, or other employees in commercial businesses with close agricultural contact and point of view.

(3) Courses of study may be arranged for any who desire to return to the farm after one or more years of training in practical agricultural subjects. (For details see Special Students in Agriculture, page 83.)

Student Advisers

Each freshman in the College of Agriculture is assigned to an adviser from the faculty, who is selected with due consideration for the major line of interest of the student. Not more than five or six students are assigned to any one person. With the advice and consent of his adviser and the Dean, any student may make such modifications in his curriculum as are deemed advisable to meet the requirements of his particular case.

The suggested curricula in the catalogue include a sufficient number of electives to afford opportunity for those who so desire to select major and minor fields of study from different departments. As an illustration, a student may decide to have his major in entomology and yet may want to be well informed in pomology. In the entomology curriculum (see page 76) there is room for 26 semester credit hours, distributed through the last two years, which may be elected from courses in, or associated with pomology.

General Curriculum

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| General Chemistry (Chem. 1y)..... | 4 | 4 |
| Survey and Composition I (Eng. 1 y)..... | 3 | 3 |
| Basic R. O. T. C. (M. I. 1 y) or Physical Education (Phys. Ed. 1 y or Phys. Ed. 2 y and 4 y)..... | 1 | 1 |
| Reading and Speaking (Speech, 1y)..... | 1 | 1 |
| Elect one from each of the following groups: | | |
| 0 Biology (Bot. 1Af or s and Zool. 1f or s)..... | 4 | 4 |
| 1 Botany (Bot. 1f and 2 s)..... | | |
| 3 Mathematics (Math. 11f and 14s)..... | 3 | 3 |
| 1-7 Modern Language (French 1y or German 1y)..... | | |
| 4 Entomology (Ent. 1f and 3 s)..... | | |
| 5 Agriculture (A. H. 1f and D. H. 1 s)..... | | |
| or (Agron. 1f and 2 s)..... | | |
| or (Hort. 1f and 11 s)..... | | |

| <i>Sophomore Year</i> | | <i>Semester</i> | |
|-----------------------------------|--|-----------------|-----------|
| | | <i>I</i> | <i>II</i> |
| Basic R. O. T. C. (M. I. 2y)..... | | 2 | 2 |

Elect one of the following:

| | | | |
|---|---|-----|-----|
| Chemistry (Chem. 12Ay and 12Bf or s)..... | } | 4-3 | 2-3 |
| 6 Economics (A. E. 1f and Econ. 5 s)..... | | | |

Elect three or four of the following:

| | | | | |
|---|-----|---|-------|-------|
| 7 Mathematics (Math. 16y)..... | 3-3 | } | 10-12 | 11-12 |
| 7 Physics (Phys. 1y)..... | 4-4 | | | |
| 5 Geology and Soils (Geol. 1f and Soils 1 s)..... | 3-5 | | | |
| 5 Agriculture (Any freshman elective or Poultry 1 s)..... | | | | |

0. Required of all students except those whose major is Botany.
1. Required of students whose major is Botany.
3. Required of students whose major is Agricultural Chemistry, Bacteriology, or Landscape Gardening.
4. Required of students whose major is Entomology.
5. Recommended for students who contemplate farming or employment in industries closely associated with farming.
6. Required of students whose major is Agricultural Economics.
- 3 and 7. Recommended for students who are interested in biological science and Dairy Manufacturing, and are likely to pursue graduate studies.

(See special curricula for Agricultural Education, Bacteriology, Botany, Dairy Manufacturing, Entomology, Floriculture, Landscape Gardening, Olericulture, and Pomology.)

AGRICULTURAL CHEMISTRY

The objective of the curriculum in Agricultural Chemistry is the fitting of students for work in agricultural experiment stations, and in soil, fertilizer, and food laboratories.

AGRICULTURAL EDUCATION

The objectives of the curricula in Agricultural Education are the teaching of secondary vocational agriculture, the work of county agents, and allied lines of the rural education service.

(For special requirements and curricula see page 120, College of Education.)

AGRICULTURAL ECONOMICS AND FARM MANAGEMENT

The courses in this department are designed to give students fundamental training in the basic economic principles underlying the agricultural industry. Training in both agricultural economics and farm management is included in the curriculum.

Agricultural economics considers the fundamental principles underlying the production, distribution, and consumption of farm products. The most efficient and economical use of the factors of production—land, labor, and capital—are emphasized. Farm resources and tax revenues, and methods of financing agricultural production from both public and private points of view, are considered. The cost of getting products from the producer to the consumer, coöperative and private types of organization, the agencies involved and services rendered, are also included, since the farmer's work does not end with producing crops, animals, and animal products. Economical distribution and the return of a fair proportion of the selling price are as important factors in farming as economical production.

The purpose of the study of farm management is to enable the individual farmer so to organize his business that it may produce the greatest continuous profit. This can be done, however, only when the organization is in accordance with the broader principles of agricultural economics. It requires not only knowledge of many factors involved in the production of crops and animals, but also administrative ability to coördinate them into the most efficient farm organization. Farming is a business, as well as a way of life, and as such demands for its successful conduct the use of business methods. The aim of the courses in farm management is to train the student in the methods of keeping farm business records, analyzing the farm business, and organizing and operating the farm as a business enterprise. This enables the student to perceive the just relationship of the several factors of production and distribution as applicable to local conditions, and to develop in him an executive and administrative capacity.

Students well trained in agricultural economics and farm management are in demand for county agent work, farm bureau work, experiment station or United States Government investigation, and college or secondary school teaching.

| <i>Junior Year</i> | <i>Semester</i> | |
|--|-----------------|-----------|
| | <i>I</i> | <i>II</i> |
| Agricultural Economics (A. E. 2f)..... | 3 | — |
| Marketing of Farm Products (A. E. 102 s)..... | — | 3 |
| Analysis of the Farm Business (A. E. 107 s)..... | — | 3 |
| Business Law (Econ. 107y)..... | 3 | 3 |
| Technology of Crop Quality (Agron. 102f)..... | 2 | — |
| Statistics (Gen. 111f and 112 s)..... | 2 | 2 |
| Expository Writing (Eng. 5f and 6 s)..... | 2 | 2 |
| Electives | 4 | 3 |
| | 16 | 16 |

Senior Year

| | | |
|--|-----|-----|
| Coöperation in Agriculture (A. E. 103f)..... | 3 | — |
| Transportation of Farm Products (A. E. 101 s)..... | — | 3 |
| Seminar (A. E. 202y)..... | 1-2 | 1-2 |
| Farm Organization and Operation (A. E. 108f)..... | 3 | — |
| Farm Machinery (F. Mech. 101f)..... | 3 | — |
| Agricultural Finance (A. E. 104 s)..... | — | 3 |
| Rural Life and Education (R. Ed. 104 s)..... | — | 3 |
| Money and Credit (Econ. 101f)..... | 2 | — |
| Electives | 4-3 | 6-5 |
| | 16 | 16 |

AGRONOMY

In the Department of Agronomy are grouped the courses in farm crops, soils, and plant breeding.

The curriculum in farm crops aims to give the student the fundamental principles of crop production. Special attempt is made to adapt the work to the young man who wishes to apply scientific principles of field crop culture and improvement on the farm. At the same time enough freedom is given the student in the way of electives so that he may register for subjects which might go along with the growing of crops on his particular farm. A student graduating from the course in agronomy should be well fitted for general farming, for the production of improved seeds, for employment with commercial firms, for investigational work in the State or Federal Experiment Stations, or for county agent work.

The division of soils gives instruction in the physics, chemistry, and biology of the soil, the courses being designed to equip the future farmer with a complete knowledge of his soil and also to give adequate training to students who desire to specialize in soils. Those who are preparing to take up research or teaching are expected to take graduate work in addition to the regular undergraduate courses that are offered. The division possesses the necessary equipment and facilities for the instruction in these subjects, and in addition affords opportunities for the student to come in contact with the research at the Agricultural Experiment Station, especially in the pot culture laboratories, and on the experimental fields at the station and in other parts of the State.

Graduate students will find unusual opportunities to fit themselves for teaching soils in agricultural colleges, to conduct research in experiment stations, and to carry on work with the Bureau of Soils, United States Department of Agriculture.

Crops Division

| | Semester | |
|--|----------|----|
| | I | II |
| <i>Junior Year</i> | | |
| Genetics (Gen. 101f)..... | 3 | — |
| Technology of Crop Quality (Agron. 102f)..... | 2 or 3 | — |
| General Bacteriology (Bact. 1f)..... | 4 | — |
| Expository Writing (Eng. 5f and 6s)..... | 2 | 2 |
| Elementary Plant Physiology (Plt. Phys. 101f)..... | 4 | — |
| Fundamentals of Economics (Econ. 5s)..... | — | 3 |
| Electives | 1 | 11 |
| | 16 | 16 |

Senior Year

| | | |
|---|----|----|
| Crop Breeding (Agron. 103f)..... | 2 | — |
| Advanced Genetics (Gen. 102 s)..... | — | 2 |
| Agricultural Economics (A. E. 2f)..... | 3 | — |
| Methods of Crop and Soil Investigations (Agron. 121 s)..... | — | 2 |
| Selected Crop Studies (Agron. 104f and s)..... | 1 | 4 |
| Soil Geography (Soils 103f)..... | 3 | — |
| Farm Drainage (F. Mech. 107 s)..... | — | 2 |
| Farm Machinery (F. Mech. 101f)..... | 3 | — |
| Farm Forestry (For. 1 s)..... | — | 3 |
| Farm Management (F. M. 2f)..... | 4 | — |
| Electives | — | 3 |
| | 16 | 16 |

Soils Division

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Junior Year</i> | | |
| Expository Writing (Eng. 5f and 6 s)..... | 2 | 2 |
| Fundamentals of Economics (Econ. 5 s)..... | — | 3 |
| General Bacteriology (Bact. 1f)..... | 4 | — |
| Soils and Fertilizers (Soils 1f)..... | 5 | — |
| Soil Management (Soils 102 s)..... | — | 3 |
| Elementary Plant Physiology (Plt. Phys. 101f)..... | 4 | — |
| Electives | 1 | 8 |
| | 16 | 16 |
| <i>Senior Year</i> | | |
| Agricultural Economics (A. E. 2f)..... | 3 | — |
| Farm Management (F. M. 2f)..... | 4 | — |
| Methods of Crop and Soil Investigations (Agron. 121 s)..... | — | 2 |
| Soil Geography (Soils 103f)..... | 3 | — |
| Farm Drainage (F. Mech. 107 s)..... | — | 2 |
| Electives | 6 | 12 |
| | 16 | 16 |

ANIMAL HUSBANDRY

The courses in animal husbandry are designed to furnish instruction in the essential principles and practices that are concerned in the breeding, feeding, management, judging, and marketing of horses, beef cattle, sheep, and swine. Attention is given to meat, to wool, and to by-products of the meat industry.

The curriculum in animal husbandry is so planned as to allow plenty of latitude in the selection of courses outside of the department, thus giving the student fundamental training and fitting him to become the owner or superintendent of general or specialized livestock farms.

Opportunity for specialization is offered to those who may desire to become instructors or investigators in the field of animal husbandry.

| <i>Junior Year</i> | <i>Semester</i> | |
|--|-----------------|-----------|
| | <i>I</i> | <i>II</i> |
| Expository Writing (Eng. 5f and 6 s)..... | 2 | 2 |
| General Bacteriology (Bact. 1f or s)..... | 4 | — |
| Fundamentals of Economics (Econ. 5 s)..... | — | 3 |
| Principles of Breeding (A. H. 102 s)..... | — | 3 |
| Feeds and Feeding (A. H. 101f)..... | 3 | — |
| Genetics (Gen. 101f)..... | 3 | — |
| Advanced Livestock Judging (A. H. 105f and 106 s)..... | 2 | 2 |
| Electives | 2 | 6 |
| | — | — |
| | 16 | 16 |

| <i>Senior Year</i> | <i>Semester</i> | |
|--|-----------------|-----------|
| | <i>I</i> | <i>II</i> |
| Agricultural Economics (A. E. 2f)..... | 3 | — |
| Farm Machinery (F. Mech. 101f)..... | 3 | — |
| Animal Hygiene (Bact. 106 s)..... | — | 3 |
| Livestock Management (A. H. 103f and 104 s)..... | 5 | 5 |
| General Physiological Chemistry (Chem. 108 s)..... | — | 4 |
| Electives | 5 | 4 |
| | — | — |
| | 16 | 16 |

BACTERIOLOGY AND PATHOLOGY

The present organization of this department has been brought about with two main purposes in view. The first is to give all students of the University an opportunity to obtain a general knowledge of this basic subject. The second purpose is to prepare students for bacteriological positions (including those of dairy, sanitary, food, and soil bacteriologists; and federal, state, and municipal bacteriologists); and for public health, research, and industrial positions. The demand for persons qualified for this work is usually much greater than the supply.

| <i>Sophomore Year</i> | <i>Semester</i> | |
|---|-----------------|-----------|
| | <i>I</i> | <i>II</i> |
| Elements of Organic Chemistry (Chem. 12y)..... | 2 | 4 |
| German or French..... | 3 | 3 |
| General Bacteriology (Bact. 1f)..... | 4 | — |
| Pathogenic Bacteriology (Bact. 2 s)..... | — | 4 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)..... | 2 | 2 |
| Electives | 5 | 3 |
| | — | — |
| | 16 | 16 |

| <i>Junior Year</i> | <i>Semester</i> | |
|---|-----------------|-----------|
| | <i>I</i> | <i>II</i> |
| Dairy Bacteriology (Bact. 101f)..... | 3 | — |
| Sanitary Bacteriology (Bact. 112 s)..... | — | 3 |
| Expository Writing (Eng. 5f and 6 s)..... | 2 | 2 |
| Serology (Bact. 115f)..... | 4 | — |
| Hematology (Bact. 103f)..... | 2 | — |
| Advanced Methods (Bact. 122 s)..... | — | 2 |
| Bacteriology Electives | — | 3-5 |
| Electives | 5 | 6-4 |
| | — | — |
| | 16 | 16 |

| <i>Senior Year</i> | <i>Semester</i> | |
|---|-----------------|-----------|
| | <i>I</i> | <i>II</i> |
| Bacteriological Problems (Bact. 123 f and 124 s)..... | 2 | 3 |
| Statistics (Gen. 111f)..... | 2 | — |
| General Physiological Chemistry (Chem. 108 s)..... | — | 4 |
| Research Methods (Bact. 121f)..... | 1 | — |
| Advanced Bacteriology (Bact. 127f)..... | 2 | — |
| Journal Club (Bact. 131f and 132 s)..... | 1 | 1 |
| Bacteriology Electives | 3-5 | 2-5 |
| Electives | 5-3 | 6-3 |
| | — | — |
| | 16 | 16 |

BOTANY

The department of Botany offers three major lines of work: general botany and morphology, plant physiology, and plant pathology. The courses listed for the curricula in botany and morphology, and plant physiology, make a kind of skeleton of essentials, to which the student adds the individual requirements to make a complete four year course. In the junior and senior years botanical courses may be elected to fit the individual needs of the student and the particular line to which he is inclined. Both the junior and senior years also allow considerable freedom in the election of non-botanical courses, in order to round out a fairly broad cultural education and to satisfy the educational requirements for those who

desire to qualify for high school teaching. The curriculum as outlined lays a good foundation for graduate work in any field of botanical science.

The curriculum offered in plant pathology is designed to give the student the fundamental principles of plant disease control and investigation. Trained plant pathologists find opportunities to do advisory, extension, and research work in the various agricultural colleges, experiment stations, and the United States Department of Agriculture, and also in numerous commercial concerns, such as seed companies, companies making spray materials, farmer coöperatives, etc. For the student who elects a major in plant pathology, the following suggested curriculum will also lay a strong foundation for the type of graduate work usually required for a successful career as a professional plant pathologist. The curriculum may be modified to meet individual needs.

General Botany and Morphology, Physiology, and Pathology

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| General Botany (Bot. 1f and 2 s)..... | 4 | 4 |
| General Chemistry (Chem. 1y)..... | 4 | 4 |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| Modern Language (French or German)..... | 3 | 3 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)..... | 1 | 1 |
| | — | — |
| | 16 | 16 |
| <i>Sophomore Year</i> | | |
| Diseases of Plants (Plt. Path. 1f)..... | 4 | — |
| Local Flora (Bot. 4s)..... | — | 2 |
| General Zoology (Zool. 1 s)..... | — | 4 |
| General Bacteriology (Bact. 1f)..... | 4 | — |
| College Algebra (Math. 11f) and Analytic Geometry (Math. 14s) | 3 | 3 |
| Modern Language | 3 | 3 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)..... | 2 | 2 |
| Electives | — | 2 |
| | — | — |
| | 16 | 16 |
| <i>General Botany and Morphology, and Plant Physiology</i> | | |
| <i>Junior Year</i> | | |
| Plant Physiology (Plt. Phys. 101f)..... | 4 | — |
| General Physics (Phys. 1y)..... | 4 | 4 |
| Plant Ecology (Plt. Phys. 102s)..... | — | 3 |
| Electives | 8 | 9 |
| | — | — |
| | 16 | 16 |

Senior Year

| | | |
|--|----|----|
| Genetics (Gen. 101f) | 3 | — |
| Methods in Plant Histology (Bot. 107f or s)..... | — | 2 |
| Botanical Electives (Maximum)..... | 7 | 10 |
| Other Electives (Minimum)..... | 6 | 4 |
| | — | — |
| | 16 | 16 |

Plant Pathology

Junior Year

| | | |
|--|----|----|
| Plant Physiology (Plt. Phys. 101f)..... | 4 | — |
| General Physics (Phys. 1y)..... | 4 | 4 |
| Introductory Entomology (Ent. 1s)..... | — | 3 |
| Elements of Organic Chemistry (Chem. 12y)..... | 2 | 4 |
| Mycology (Bot. 102f)..... | 4 | — |
| Research Methods (Plt. Path. 103s)..... | — | 2 |
| Methods in Plant Histology (Bot. 107s)..... | — | 2 |
| Electives | 2 | 1 |
| | — | — |
| | 16 | 16 |

Senior Year

| | | |
|--------------------------------------|----|----|
| Plant Ecology (Plt. Phys. 102s)..... | — | 3 |
| Plant Anatomy (Bot. 101f)..... | 3 | — |
| Genetics (Gen. 101f)..... | 3 | — |
| Plt. Path. 101 or 102..... | 2 | 2 |
| Electives | 8 | 11 |
| | — | — |
| | 16 | 16 |

DAIRY HUSBANDRY

The department of Dairy Husbandry offers courses in two major lines: dairy production and dairy manufacture. The curriculum in each of these is so arranged as to give the student an intimate knowledge of the science, and facility in the art of dairy husbandry practice. The dairy production option is organized to meet the specific requirements of students who are especially interested in the care, feeding, breeding, management, and improvement of dairy cattle and in the production and sale of market milk.

The option in dairy manufactures is planned to meet the particular demands of those interested in the processing and distribution of milk, in dairy plant operation, and in the manufacture and sale of butter, cheese, ice-cream, and other milk products.

The dairy herd and the dairy laboratories are available to students for instruction and for research. Excellent opportunity is, therefore, afforded to both advanced undergraduate and graduate students for original investigation and research. Graduates in the courses in dairy husbandry should be well qualified to become managers of dairy farms, teachers, and investigators in the State and Federal Agricultural Experiment Stations, or to enter the field of commercial dairying.

Dairy Manufacturing

| | Semester | |
|--|----------|----|
| | I | II |
| <i>Sophomore Year</i> | | |
| Elements of Organic Chemistry (Chem. 12y)..... | 2 | 4 |
| Quantitative Analysis (Chem. 4f or s)..... | — | 4 |
| General Bacteriology (Bact. 1f or s)..... | 4 | — |
| Introductory Dairy Science (D. H. 1f or s)..... | 3 | — |
| Fundamentals of Economics (Econ. 5f or s)..... | — | 3 |
| R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y)..... | 2 | 2 |
| Electives | 5 | 3 |
| | 16 | 16 |

Junior Year

| | | |
|--|----|----|
| Dairy Bacteriology (Bact. 101f and 102 s)..... | 3 | 3 |
| Dairy Manufacturing (D. H. 104f and 105s)..... | 5 | 5 |
| Grading Dairy Products (D. H. 108s)..... | — | 1 |
| Dairy Plant Experience (D. H. 110f)..... | 3 | — |
| Expository Writing (Eng. 5f and 6 s)..... | 2 | 2 |
| Electives | 3 | 5 |
| | 16 | 16 |

Senior Year

| | | |
|--|----|----|
| Market Milk (D. H. 106f)..... | 5 | — |
| Analysis of Dairy Products (D. H. 107s)..... | — | 3 |
| Advanced Grading of Dairy Products (D. H. 109f)..... | 1 | — |
| Dairy Plant Experience (D. H. 111f)..... | 3 | — |
| Dairy Production (D. H. 101y)..... | 3 | 3 |
| Agricultural Economics (A. E. 2f)..... | 3 | — |
| Electives | 1 | 10 |
| | 16 | 16 |

Dairy Production

Junior Year

| | | |
|--|----|----|
| Expository Writing (Eng. 5f and 6 s)..... | 2 | 2 |
| Fundamentals of Economics (Econ. 5 s)..... | — | 3 |
| General Bacteriology (Bact. 1f or s)..... | 4 | — |
| Dairy Production (D. H. 101y)..... | 3 | 3 |
| Principles of Breeding (A. H. 102 s)..... | — | 3 |
| Advanced Dairy Cattle Judging (D. H. 102 s)..... | — | 1 |
| Feeds and Feeding (A. H. 101f)..... | 3 | — |
| Farm Drainage (F. Mech. 107 s)..... | — | 2 |
| Electives | 4 | 2 |
| | 16 | 16 |

Senior Year

| | Semester | |
|---|----------|----|
| | I | II |
| Agricultural Economics (A. E. 2f)..... | 3 | — |
| Market Milk (D. H. 106f)..... | 5 | — |
| Dairy Bacteriology (Bact. 101f)..... | 3 | — |
| Animal Hygiene (Bact. 106 s)..... | — | 3 |
| Advanced Study of Dairy Breeds (D. H. 103 s)..... | — | 2 |
| Electives | 5 | 11 |
| | 16 | 16 |

ENTOMOLOGY

This department is engaged in the teaching of entomology to all agricultural students as a basis for future work in pest control, in the preparation of technically trained entomologists, and in furnishing courses to students in Arts and Sciences and Education.

The success of the farmer and particularly the fruit grower is in large measure dependent upon his knowledge of the methods of preventing or combating the pests that menace his crops. Successful methods of control are emphasized in the economic courses.

The fact that the entomological work of the Experiment Station, the Extension Service, the College of Agriculture, and the office of the State Entomologist are in one administrative unit, enables the student in this department to avail himself of the many advantages accruing therefrom. Advanced students have special advantages in that they may be assigned to work on Station projects already under way. The department takes every advantage of the facilities offered by the Bureau of Entomology of the U. S. Department of Agriculture, the Beltsville Research Center, the National Museum, Smithsonian Institution, various other local laboratories, the libraries in Washington, and the Washington Entomological Society. There is an active Entomological Society composed of the students and staff of the department. A monthly news magazine is published, and there are numerous other profitable projects in which all students may participate. Thus students are given many opportunities of meeting authorities in the various fields of entomology, to observe projects under way, consult collections, and hear addresses on every phase of entomology. Following is the suggested curriculum in entomology. It can be modified to suit individual demand. Students not starting this curriculum in their freshman year can with a few changes in schedule meet the requirements in the four years.

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| General Chemistry (Chem. 1y)..... | 4 | 4 |
| General Zoology (Zool. 1s)..... | — | 4 |
| General Botany (Bot. 1f)..... | 4 | — |
| Introductory Entomology (Ent. 1f)..... | 3 | — |
| Insect Biology (Ent. 3s)..... | — | 3 |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y) | 1 | 1 |
| | — | — |
| | 16 | 16 |

| | | |
|---|-------|-------|
| <i>Sophomore Year</i> | | |
| Elements of Organic Chemistry (Chem. 12y)..... | 2-4 | 4-2 |
| College Algebra (Math. 11f)..... | 3 | — |
| Analytic Geometry (Math. 14s)..... | — | 3 |
| Survey and Composition II (Eng. 2f and 3s)..... | 3 | 3 |
| French or German..... | 3 | 3 |
| Insect Morphology and Taxonomy (Ent. 2y)..... | 3 | 3 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y) | 2 | 2 |
| | — | — |
| | 16-18 | 16-18 |

| | | |
|---|----|----|
| <i>Junior Year</i> | | |
| General Physics (Phys. 1y)..... | 4 | 4 |
| French or German..... | 3 | 3 |
| *Economic Entomology (Ent. 101y)..... | 2 | 2 |
| Diseases of Plants (Plt. Path. 1f)..... | 4 | — |
| General Bacteriology (Bact. 1s)..... | — | 4 |
| Electives | 3 | 3 |
| | — | — |
| | 16 | 16 |

| | | |
|--|----|----|
| <i>Senior Year</i> | | |
| *Insect Pests of Special Groups (Ent. 104y)..... | 3 | 3 |
| Seminar (Ent. 103y)..... | 1 | 1 |
| Special Problems (Ent. 4f or 4s)..... | 2 | 2 |
| Electives | 10 | 10 |
| | — | — |
| | 16 | 16 |

* Ent. 101y and Ent. 104y taught in alternate years.

FARM MECHANICS

The department of Farm Mechanics is organized to offer students of agriculture training in those agricultural subjects which are based upon engineering principles. These subjects may be grouped under three heads: farm machinery, farm buildings, and farm drainage.

The modern tendency in farming is to replace hand labor by the operation of machinery. In many cases horses are being replaced by tractors. Trucks, automobiles, and stationary engines are found on almost all farms. It is highly advisable that the student of any branch of agriculture have a working knowledge of the design, adjustments, and repair of these machines.

More than one-fourth of the total value of Maryland farms is represented by the buildings. The study of the design of various buildings, from the standpoint of economy, sanitation, efficiency, and appearance, is, therefore, important.

Studies included in the study of drainage are as follows: the principles of tile drainage, the laying out and construction of tile drain systems, the use of open ditches, and Maryland drainage laws.

GENERAL AGRICULTURE

Those who do not care to specialize in any particular phase of agriculture will pursue the following curriculum:

| | Semester | |
|--|----------|----|
| | I | II |
| <i>Junior Year</i> | | |
| Diseases of Plants (Plt. Path. 1f)..... | 4 | — |
| Plant Physiology (Plt. Phys. 101f)..... | 4 | — |
| General Bacteriology (Bact. 1f)..... | 4 | — |
| Expository Writing (Eng. 5f and 6 s)..... | 2 | 2 |
| Farm Poultry (Poultry 1 s)..... | — | 3 |
| Genetics (Gen. 101f)..... | 3 | — |
| Farm Accounting (F. M. 1 s)..... | — | 3 |
| Principles of Breeding (A. H. 102 s)..... | — | 3 |
| Fundamentals of Economics (Econ. 5 s)..... | — | 3 |
| Electives | — | 2 |
| | — | — |
| | 17 | 16 |

| | | |
|--|----|----|
| <i>Senior Year</i> | | |
| Agricultural Economics (A. E. 2f)..... | 3 | — |
| Farm Management (F. M. 2f)..... | 4 | — |
| Farm Machinery (F. Mech. 101f)..... | 3 | — |
| Gas Engines, Tractors, and Automobiles (F. Mech. 102 s)..... | — | 3 |
| Farm Drainage (F. Mech. 107 s)..... | — | 2 |
| Farm Forestry (For. 1 s)..... | — | 3 |
| Electives | 6 | 8 |
| | — | — |
| | 16 | 16 |

GENETICS AND STATISTICS

Rapid accumulation of knowledge in the field of genetics has changed the viewpoint of those interested in plant and animal breeding and in eugenics.

Teachers and investigators have increasing occasion to interpret statistical data presented by others, as well as to gather and organize original material.

The department of Genetics and Statistics offers students training in (1) the principles of heredity and genetics, and (2) the tools and methods employed in statistical description and induction.

HORTICULTURE

There are several reasons why the State of Maryland should be pre-eminent in horticulture and offer excellent opportunities for horticultural enterprises. The more evident ones are the wide variation in soil and climate from the Eastern Shore to the mountains in the West, the nearness to many large Eastern markets, and the large number of railroads, inter-urban lines, highways, and waterways, which combine to favor the growing of horticultural crops and to make marketing easy and comparatively cheap.

The department of Horticulture offers four major lines of work: pomology, olericulture, floriculture, and landscape gardening. Students wishing to specialize in horticulture may take a general course during the four years, or the student may specialize in any of the four divisions. The courses have been so planned that upon their completion students should be fitted to engage in commercial work, county agent work, or teaching and investigational work in State and Federal institutions.

On the University campus, the department has at its disposal ten acres of ground devoted to vegetable gardening, eighteen acres of orchards, small fruits, and vineyards, twelve greenhouses, in which research and teaching are conducted, and one building which is devoted to horticultural teaching and research. In addition, the department has acquired 250 acres of land, three miles from the college, which tract is used for experimental and teaching purposes. Members of the teaching staff are likewise members of the experiment station staff, hence students have an opportunity to become acquainted with the research being carried on in the department. Excellent opportunity for investigating new problems is afforded to advanced undergraduates and to graduate students.

Students who intend to specialize in Pomology, Olericulture, Floriculture, or Landscape Gardening are required to take courses of study which it is felt will best equip them for their future work in Horticulture.

The following curricula will be adjusted to the special needs of the student whose interests lie in the general scientific field or the one who is preparing for work in technical lines. The object is to fit students most effectively to fill positions of certain types, as noted above.

Pomology—Olericulture—Floriculture

| | Semester | |
|--|----------|--------|
| | I | II |
| <i>Freshman Year</i> | | |
| General Chemistry (Chem. 1y)..... | 4 | 4 |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| General Botany (Bot. 1f and 2s)..... | 4 | 4 |
| College Algebra (Math. 11f); Analytic Geometry (Math. 14s) | 3 | 3 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| Basic R.O.T.C. (M. I. 1y) or Physical Education (Phys. Ed. 1y) | 1 | 1 |
| | 16 | 16 |
| <i>Sophomore Year</i> | | |
| Diseases of Plants (Plt. Path. 1f)..... | 4 | — |
| Geology (Geol. 1f)..... | 3 | — |
| Soils and Fertilizers (Soils 1s)..... | — | 5 |
| Elements of Organic Chemistry (Chem. 12y)..... | 2 | 4 |
| *Elementary Pomology (Hort. 1f)..... | 3 | — |
| *Principles of Vegetable Culture (Hort. 11s)..... | — | 3 |
| **General Landscape Gardening (Hort. 31s)..... | — | 2 |
| Practical Pomology Lab. (Hort. 7f, 8s)..... | 2 | 2 |
| Basic R.O.T.C. (M.I. 2y) or Physical Education (Phys. Ed. 3y) | 2 | 2 |
| Electives | — | 0 or 1 |
| | 16 | 18 |
| <i>Pomology</i> | | |
| <i>Junior Year</i> | | |
| Fundamentals of Economics (Econ. 5 s)..... | — | 3 |
| Small Fruit Culture (Hort. 4 s)..... | — | 2 |
| Fruit Judging (Hort. 5f)..... | 2 | — |
| Systematic Pomology (Hort. 107f)..... | 3 | — |
| Expository Writing (Eng. 5f and 6 s)..... | 2 | 2 |
| Plant Physiology (Plt. Phys. 101f)..... | 4 | — |
| Introductory Entomology (Ent. 1 s)..... | — | 3 |
| Genetics (Gen. 101f)..... | 3 | — |
| Electives | 2 | 6 |
| | 16 | 16 |
| <i>Senior Year</i> | | |
| Commercial Fruit Growing (Hort. 101f)..... | 3 | — |
| Economic Fruits of the World (Hort. 102f)..... | 2 | — |
| Horticultural Seminar (Hort. 43y)..... | 1 | 1 |
| General Landscape Gardening (Hort. 31 s)..... | — | 2 |
| General Floriculture (Hort. 21f)..... | 2 | — |
| Farm Management (F. M. 2f)..... | 4 | — |
| Horticultural Research and Thesis (Hort. 42y)..... | 2 | 2 |
| Electives | 2 | 11 |
| | 16 | 16 |

*Required for students in Pomology and Olericulture.
**Required for students in Floriculture.

| Olericulture | | |
|--|----------|----|
| Junior Year | Semester | |
| | I | II |
| Fundamentals of Economics (Econ. 5 s)..... | — | 3 |
| Small Fruit Culture (Hort. 4 s)..... | — | 2 |
| Diseases of Plants (Plt. Path. 1f)..... | 4 | — |
| Genetics (Gen. 101f)..... | 3 | — |
| Expository Writing (Eng. 5f and 6 s)..... | 2 | 2 |
| Truck Crop Production (Hort. 12f)..... | 3 | — |
| Vegetable Forcing (Hort. 13 s)..... | — | 3 |
| Introductory Entomology (Ent. 1 s)..... | — | 3 |
| Electives | 4 | 3 |
| | 16 | 16 |
| Senior Year | | |
| Farm Management (F. M. 2f)..... | 4 | — |
| General Landscape Gardening (Hort. 31 s)..... | — | 2 |
| General Floriculture (Hort. 21f)..... | 2 | — |
| Tuber and Root Crops (Hort. 103f)..... | 2 | — |
| Systematic Olericulture (Hort. 105f)..... | 3 | — |
| Advanced Truck Crop Production (Hort. 104 s)..... | — | 2 |
| Horticultural Research and Thesis (Hort. 42y)..... | 2 | 2 |
| Horticultural Seminar (Hort. 43y)..... | 1 | 1 |
| Electives | 2 | 9 |
| | 16 | 16 |
| Floriculture | | |
| Junior Year | | |
| *Greenhouse Management (Hort. 22y)..... | 3 | 3 |
| Floricultural Practice (Hort. 23y)..... | 2 | 2 |
| Floricultural Trip (Hort. 27 s)..... | — | 1 |
| *Greenhouse Construction (Hort. 24 s)..... | — | 2 |
| *Garden Flowers (Hort. 26f)..... | 3 | — |
| Expository Writing (Eng. 5f and 6 s)..... | 2 | 2 |
| Fundamentals of Economics (Econ. 5 s)..... | — | 3 |
| Diseases of Plants (Plt. Path. 1f)..... | 4 | — |
| Local Flora (Bot. 4 s)..... | — | 2 |
| Elements of Landscape Design (Hort. 32f)..... | 3 | — |
| Electives | — | 1 |
| | 17 | 16 |

* Courses taken by both sophomores and juniors in alternate years.

| Senior Year | Semester | |
|---|----------|----|
| | I | II |
| *Commercial Floriculture (Hort. 25y)..... | 3 | 3 |
| Plant Materials (Hort. 106y)..... | 2 | 3 |
| Vegetable Forcing (Hort. 13 s)..... | — | 3 |
| Agricultural Economics (A. E. 2f)..... | 3 | — |
| Horticultural Seminar (Hort. 43y)..... | 1 | 1 |
| Horticultural Research and Thesis (Hort. 42y)..... | 2 | 2 |
| Electives | 5 | 4 |
| | 16 | 16 |
| Landscape Gardening | | |
| Freshman Year | | |
| General Chemistry (Chem. 1y)..... | 4 | 4 |
| General Zoology (Zool. 1 s)..... | — | 4 |
| General Botany (Bot. 1f)..... | 4 | — |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| College Algebra (Math. 11f); Analytic Geometry (Math. 14 s) | 3 | 3 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y) | 1 | 1 |
| | 16 | 16 |
| Sophomore Year | | |
| French or German..... | 3 | 3 |
| Diseases of Plants (Plt. Path. 1f)..... | 4 | — |
| Geology (Geol. 1f)..... | 3 | — |
| Soils and Fertilizers (Soils 1 s)..... | — | 3 |
| Plane Surveying (Surv. 2y)..... | 2 | 2 |
| *General Landscape Gardening (Hort. 31 s)..... | — | 2 |
| Expository Writing (Eng. 5f and 6 s)..... | 2 | 2 |
| Engineering Drafting (Dr. 1y)..... | 1 | 1 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y) | 2 | 2 |
| Electives | — | 2 |
| | 17 | 16 |

* Courses taken by both sophomores and juniors in alternate years.

| <i>Junior Year</i> | <i>Semester</i> | |
|--|-----------------|-----------|
| | <i>I</i> | <i>II</i> |
| Elementary Pomology (Hort. 1f)..... | 3 | — |
| †Plant Materials (Hort. 106y)..... | 2 | 3 |
| †History of Landscape Gardening (Hort. 35f)..... | 1 | — |
| *Elements of Landscape Design (Hort. 32f)..... | 3 | — |
| †Landscape Design (Hort. 33 s)..... | — | 3 |
| †Garden Flowers (Hort. 26f)..... | 3 | — |
| Fundamentals of Economics (Econ. 5 s)..... | — | 3 |
| Plant Physiology (Plt. Phys. 101f)..... | 4 | — |
| Local Flora (Bot. 4 s)..... | — | 2 |
| Farm Drainage (F. Mech. 107 s)..... | — | 2 |
| Electives | — | 3 |
| | 16 | 16 |

| <i>Senior Year</i> | | |
|---|----|----|
| †Landscape Design (Hort. 34f)..... | 3 | — |
| †Landscape Construction and Maintenance (Hort. 36 s)..... | — | 1 |
| †Civic Art (Hort. 37 s)..... | — | 2 |
| Horticultural Research and Thesis (Hort. 42y)..... | 2 | 2 |
| Horticultural Seminar (Hort. 43y)..... | 1 | 1 |
| Electives | 10 | 10 |
| | 16 | 16 |

POULTRY HUSBANDRY

The curriculum in poultry husbandry is designed to give the student a comprehensive view of the practices of poultry raising. Students who expect to become teachers, extension workers, or investigators should choose as electives such subjects as psychology, economic history, sociology, philosophy, and political science.

| <i>Junior Year</i> | | |
|--|----|----|
| Poultry Production (Poultry 103 s)..... | — | 4 |
| Expository Writing (Eng. 5f and 6 s)..... | 2 | 2 |
| General Bacteriology (Bact. 1f)..... | 4 | — |
| Pathogenic Bacteriology (Bact. 2 s)..... | — | 4 |
| Genetics (Gen. 101f)..... | 3 | — |
| Poultry Keeping (Poultry 102f)..... | 4 | — |
| Fundamentals of Economics (Econ. 5 s)..... | — | 3 |
| Electives | 3 | 3 |
| | 16 | 16 |

* Courses taken by both sophomores and juniors in alternate years.
† Courses taken by both juniors and seniors in alternate years.

| <i>Senior Year</i> | <i>Semester</i> | |
|---|-----------------|-----------|
| | <i>I</i> | <i>II</i> |
| Agricultural Economics (A. E. 2f)..... | 3 | — |
| Farm Management (F. M. 2f)..... | 4 | — |
| Farm Accounting (F. M. 1 s)..... | — | 3 |
| Animal Hygiene (Bact. 106 s)..... | — | 3 |
| Poultry Breeds (Poultry 104f)..... | 4 | — |
| Poultry Management (Poultry 105 s)..... | — | 4 |
| Marketing of Farm Products (A. E. 102 s)..... | — | 3 |
| Electives | 5 | 3 |
| | 16 | 16 |

COMBINED PROGRAM IN AGRICULTURE AND VETERINARY MEDICINE

By arrangement with the Veterinary School of the University of Pennsylvania, students who wish to specialize in veterinary medicine may pursue a combined six-year program of study. The first three years of this program are taken at College Park. The last three years are taken at the Veterinary School of the University of Pennsylvania. After successful completion of the three years' work at the University of Maryland and the first year's work at the University of Pennsylvania, the student receives his B. S. degree from the University of Maryland. After successful completion of the last two years' work at the University of Pennsylvania he receives his degree in Veterinary Medicine from the Veterinary School.

SPECIAL STUDENTS IN AGRICULTURE

Mature students who are not candidates for degrees may, on consent of the dean, register as special students and pursue a program of studies not included in any regular curriculum, but arranged to meet the needs of the individual. In case such persons have not fulfilled the regular college entrance requirements, they may arrange to audit (to attend without "credit") certain of the agricultural classes. All university fees for these special students are the same as fees for regular students.

There are many young farmers who desire to take short intensive courses in their special lines of work during slack times on the farm. Arrangements have been made to permit such persons to register at the office of the Dean of the College of Agriculture and receive cards granting them permission to visit classes and work in the laboratories of the different departments. This opportunity is created to aid florists, poultrymen, fruit-growers, gardeners, or other especially interested persons who are able to get away from their work at some time during the year.

The regular charges are *\$5.00 for registration and \$1.00 per week for the time of attendance.

* One registration is good for any amount of regular or intermittent attendance during a period of four years.

AGRICULTURAL EXPERIMENT STATION

HARRY J. PATTERSON, *Director*.

The agricultural work of the University naturally comprises three fields: research, instruction, and extension. The Agricultural Experiment Station is the agricultural research agency of the University, which has for its purpose the increase of knowledge relating to agriculture, primarily for the direct benefit of the farmer. It is also the real source of agricultural information for use in the classroom and for demonstrations in the field.

The Experiment Station work is supported by both State and Federal appropriations. The Hatch Act, passed by Congress in 1887, appropriates \$15,000 annually; the Adams Act, passed in 1906, provides \$15,000 annually; and the Purnell Act, passed in 1925, provides \$60,000 annually. The State appropriation for 1935 was \$54,660.

The objects, purposes, and work of the Experiment Station as set forth by these acts are as follows:

"That it shall be the object and duty of said Experiment Stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories."

The Purnell Act also permits the appropriation to be used for conducting investigations and making experiments bearing on the manufacture, preparation, use, distribution, and marketing of agricultural products, and for such economic and sociological investigations as have for their purpose the development and improvement of the rural home and rural life.

The Maryland Station, in addition to the work conducted at the University, operates a sub-station farm of fifty acres at Ridgely, Caroline County, and a farm of about sixty acres at Upper Marlboro for tobacco investigation. Experiments in co-operation with farmers are conducted at many different points in the State. These tests consist of studies with soils, fertilizers, crops, orchards, insect and plant disease control, and stock feeding.

The results of the Experiment Station work during the past quarter of a century have developed a science of agriculture to teach, and have laid a substantial foundation for agricultural development. The placing of agricultural demonstrations and extension work on a national basis has been the direct outgrowth of the work of the Experiment Stations.

Students taking courses in agriculture are kept in close touch with the investigations in progress.

EXTENSION SERVICE

T. B. SYMONS, *Director.*

The Extension Service is that branch of the University of Maryland, established by Federal and State law, which is designed to assist farmers and their families in promoting the prosperity and welfare of agriculture and rural life. Its work is conducted in co-operation with the United States Department of Agriculture.

The Extension Service is represented in each county of the State by a county agent and a home demonstration agent. Through these agents and its staff of specialists, it comes into intimate contact with rural people and with the problems of the farm and home.

Practically every phase of agriculture and rural home life comes within the scope of the work undertaken by the Extension Service. Farmers are supplied with details of crop and livestock production, and with instructions for controlling diseases and insect pests; they are encouraged and aided in organized effort, helped with marketing problems, and in every way possible assisted in improving economic conditions on the farm.

This service is charged with carrying out in Maryland the program of the Agricultural Adjustment Administration.

Rural women are likewise assisted in the problems of the home. They are made acquainted with time- and labor-saving devices, with simpler and easier methods of work, with new knowledge of foods, with new ideas about home furnishing, with practical methods of home sewing and millinery construction, and with such other information as tends to make rural home life attractive and satisfying.

For rural boys and girls, the Extension Service provides a valuable type of instruction in agriculture and home economics through its 4-H Club work. Actual demonstrations conducted by the boys and girls themselves, under supervision of the county and home demonstration agents, are the best possible means of imparting to youthful minds valuable information in crop and livestock production and in the household arts. The 4-H Club work affords rural boys and girls a real opportunity to develop self-confidence, perseverance, and leadership.

The Extension Service works in accord with all other branches of the University of Maryland and with all agencies of the United States Department of Agriculture. It co-operates with all farm and community organizations in the State which have as their major object the improvement of agriculture and rural life; and it aids in every way possible in making effective the regulatory work and other measures instituted by the State Board of Agriculture.

The Extension Service is gradually developing activities in the general adult educational field.

COLLEGE OF ARTS AND SCIENCES

T. H. TALIAFERRO, *Dean.*

The College of Arts and Sciences provides four years of liberal training in biological sciences, economics and finance, history, languages and literatures, mathematics, philosophy, physical sciences, political science, psychology, and sociology. It thus affords an opportunity to acquire a general education which shall serve as a foundation for success in whatever profession or vocation the student may choose. In particular it prepares the ground and lays the foundation for the learned professions of law, medicine, theology, and teaching, and even the more technical professions of engineering, public health service, and business administration. Through the aid which it furnishes other colleges of the University it aims to give the students of these colleges the outlook necessary for liberal culture and for public service.

Divisions

The College of Arts and Sciences is divided into one Lower Division and three Upper Divisions. Under the latter are grouped the various departments as follows: (1) The Division of Humanities: Classical Languages, Comparative Literature, English Literature and Philology, Modern Languages, Music, Philosophy, and Speech; (2) The Division of Natural Sciences: Chemistry, Geology, Mathematics, Physics, Zoology, and associated departments in other colleges of the University such as Bacteriology, Botany, and Entomology; (3) The Division of Social Sciences: Business Administration, Economics, History, Political Science, Psychology, Sociology, and associated departments in other colleges.

These Upper Divisions direct the courses of study of students doing their major work in departments of the College of Arts and Sciences, and designate minimum requirements, the fulfillment of which is necessary to qualify a student for admission to major work in each Upper Division.

Requirements for Admission

The requirements for admission to the College of Arts and Sciences are in general the same as those for admission to the other colleges and schools of the University. See Section I, Entrance.

For admission to the pre-medical curriculum, two years of any one foreign language in addition to the regularly prescribed units are required. A detailed statement of the requirements for admission to the School of Medicine and the relation of these to the pre-medical curriculum will be found under the heading School of Medicine.

Students With Advanced Standing

Students entering the junior year of the College of Arts and Sciences with advanced standing from other accredited universities or from other

colleges of this university must meet the requirements of the first two years to the extent of their deficiencies in credits in Arts and Sciences. Scholarship requirements as outlined in Section I of this catalogue will apply to all courses offered for advanced standing.

Electives in Other Colleges and Schools

A limited number of courses may be counted for credit in the College of Arts and Sciences for work done in other colleges and schools of the University.

The number of semester hours accepted from the various colleges is as follows:

College of Agriculture—Fifteen.*

College of Education—Twenty.

College of Engineering—Fifteen.

College of Home Economics—Fifteen.

School of Law—In the combined program the first year of law must be completed.

School of Medicine—In the combined program the first year of medicine must be completed.

School of Nursing—Three years in combined program.

Degrees

The degrees conferred upon students who have met the prescribed conditions for degrees in the College of Arts and Sciences are Bachelor of Arts and Bachelor of Science.

The baccalaureate degree from the College of Arts and Sciences may be conferred upon a student who has satisfied all entrance requirements and has secured a minimum of 120 semester credit hours not including the six credit hours of basic military science required of all able-bodied men students, or the six credit hours of physical education for women and for such men as are excused from military science. Of these 120 academic credits 60 are to be acquired in the Lower Division and 60 in the Upper Division.

Graduates of this college who have completed the regular course are awarded the degree of Bachelor of Arts, except that, upon request, any student who has met the requirements for that degree may be awarded the degree of Bachelor of Science, provided the major portion of the work has been done in the field of science, and the application has the approval of the department in science in which the major work has been carried. Students who have elected the combined program of Arts and Medicine may be granted the degree of Bachelor of Science after the completion of at least three years of the work of this college and the first year of the School of Medicine. Those electing the combined five-year Academic and Nursing Course, for which the degree of Bachelor of Science may be

*Students electing botany, bacteriology, or entomology as the major field are not limited to fifteen hours.

awarded upon the completion of the full course, must take the Pre-Nursing curriculum at College Park before the Nursing Course in Baltimore. Those taking the combined course in Arts and Law may be awarded the Bachelor of Arts degree after the completion of three years of the work of this college and one year of full-time law course, or its equivalent, in the School of Law.

In the regular course and in all the combined programs the last thirty credit hours of courses in the Arts and Sciences must be completed in residence at College Park, or under members of the faculty of the College of Arts and Sciences.

Student Responsibility

The individual student will be held responsible for the selection of the courses and the major in conformity with the regulations of the College of Arts and Sciences. The student will also be held responsible for a knowledge of the general Academic Regulations.

THE LOWER DIVISION

The work of the first two years in the College of Arts and Sciences is designed to give the student a basic general education, and to prepare him for specialization in the junior and senior years.

It is the student's responsibility to develop in these years such proficiency in basic subjects as may be necessary for his admission into one of the Upper Divisions of the College. Personal aptitudes and a general scholastic ability must also be demonstrated in these two years if permission to pursue a major study is desired.

Suggested courses of study for the freshman and sophomore years are given under each of the Divisions. The student should follow the curriculum for which he is believed to be best fitted. It will be noted that there is a great deal of similarity in these outlines for the freshman and sophomore years, and a student not taking a special curriculum need not consider himself attached to any particular Division until the beginning of the junior year, at which time it is necessary to select a major.

The work of this Division is under the direction of the Dean and the Chairman of the Lower Division.

Typical Freshman Program

| | Semester | |
|---|----------|-------|
| | I | II |
| †Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| *Foreign Language..... | 3 | 3 |
| Science (Physical or Biological)..... | 3-4 | 3-4 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)..... | 1 | 1 |
| ‡Elect six to seven credits from the following: | | |
| Reading and Speaking (Speech 1y)..... | 6-7 | 6-7 |
| Introduction to the Social Sciences (Soc. Sci. 1y)..... | | |
| General European History (H. 1y)..... | | |
| History of England and Greater Britain (H. 3y)..... | | |
| Mathematics (Math. 8f, 11f and 14s or 10s, 12f and 15s.....) | | |
| American National Government (Pol. Sci. 1f or s)..... | | |
| Library Methods (L. S. 1f or s)..... | 9-10 | 9-10 |
| State Government (Pol. Sci. 4s)..... | | |
| Freshman Lectures | 16-18 | 16-18 |
| Total | 16-18 | 16-18 |

Typical Sophomore Program

| | | |
|--|-------|-------|
| Survey and Composition II (Eng. 2f and 3s)..... | 3 | 3 |
| Foreign Language | 3 | 3 |
| R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)..... | 2 | 2 |
| General Electives from the College of Arts and Sciences, of which not more than three hours per semester may be taken in the Humanities..... | 9-10 | 9-10 |
| Total | 17-18 | 17-18 |

Normal Load

The normal load for the freshman year is seventeen credit hours each semester. This includes one hour of basic military science or physical education. The normal load for the sophomore year is seventeen credit hours per semester, two hours of which are military science or physical education.

†A placement test is given during Freshman Week to determine whether the student is adequately prepared for Eng. 1y. Students failing this are required to take Eng. 1A, a one-semester course, without credit. After five weeks, students may be transferred from 1A to 1y, for which they will receive full credit, or from 1y to 1A, according to their demonstrated ability.

*Students who offer two units of a foreign language for entrance, but who because of inadequate preparation register for the first year of the subject, will receive only one-half credit.

‡The choice should be in accordance with the special requirements of the Upper Division which the student may design to enter.

In no case shall the load in the freshman and sophomore years exceed eighteen credit hours, except for sophomore students whose average grade is B or above for the preceding year at this university. With the approval of the Dean these honor students may be permitted to carry a maximum of nineteen credit hours.

Advisers in the Lower Division

Each student is assigned to a member of the faculty who will act as his personal adviser, assisting him in the selection of his courses and the arrangement of his schedule, and in any other matters on which he may need assistance or advice. Students are expected to report to the advisers at periodic intervals for conferences.

Number of Credits and Quality of Work Required for Advancement to the Upper Divisions

A student must acquire at least fifty-eight semester credits, exclusive of military science, with an average grade of C, in this division, before being admitted to an advanced division. The average grade in subjects taken in the major department desired must be C or better.

THE DIVISION OF HUMANITIES

The Division consists of the departments of Classical Languages, Comparative Literature, English Literature and Philology, Modern Languages, Music, Philosophy, and Speech. It has charge of students who elect major work in English or Modern Languages, and also may provide minors for students who take their major work in other Divisions or Colleges. Students are assigned to the Division when they have successfully met divisional requirements for junior standing.

Requirements for Entering the Division of Humanities

A student is eligible to enter his major or minor work in the Division of Humanities when he has fifty-eight semester credit hours of academic work (exclusive of physical education or military science) to his credit, with an average of C or above. He must also have an average as high as C in his major department.

The following minimum requirements should be completed, as far as possible, before the beginning of the junior year, and *must* be completed before graduation:

| | |
|---|-------|
| | hours |
| I. Military Science or Physical Education..... | 6 |
| II. Library Science | 1 |
| III. | |
| A. Division of Humanities: | |
| 1. English and Speech..... | 14 |
| English 1y | |
| English 2f and 3 s | |
| Speech 1y | |
| 2. Modern Languages..... | (12)* |
| (see note below)* | |
| 3. Philosophy | 3 |
| B. Division of Social Sciences..... | 15 |
| (Three hours must be in psychology.) | |
| C. Division of Natural Sciences..... | 12 |
| (At least one complete year of a natural science must be included.) | |

Major and Minor Requirements

At the beginning of the junior year, each student must select a major in one of the fields indicated below, and before graduation must complete one major and one minor. The courses constituting the major and the minor must conform to the requirements of the department in which the major work is done. A minimum of 126 hours, of which a minimum of 60 hours must be completed in the junior and senior years, shall be completed before the Division will recommend a student for graduation. The average of work taken in the major field must be as high as C.

| Fields | |
|-------------------------|-------------|
| **Classical Languages | **Music |
| †Comparative Literature | †Philosophy |
| English | **Speech |
| French | Spanish |
| German | |

*To be accepted unconditionally in the Division of Humanities, a student must have attained a reasonable proficiency in at least one modern foreign language, and in any case, he must give proof of this proficiency before graduation. In order to satisfy this requirement, the grade of C or better must be obtained in one of the general language examinations which are given during the first and last days of each school year. The student must show in this examination that he has reached the level of attainment to be expected after two years of a college language course: (1) that he can translate with reasonable accuracy; (2) that his pronunciation is approximately correct; (3) that he is acquainted with the elements of grammar. The student may elect to take this examination whenever he wishes, and when he passes it, he will have satisfied requirement III.A.2 above; but in no case will a student in the Division of Humanities be graduated who has not had at least 6 semester hours of modern language work in college.

†Not available at present for a major.

** Not available at present for a major or a minor.

A major shall consist of not fewer than 20 nor more than 40 semester credit hours in one of these fields of study, *in addition to* courses listed in the schedule of minimum requirements above. At least 16 of these hours shall be taken in courses listed for advanced undergraduates and graduates.

A minor shall consist of not fewer than 12 nor more than 24 semester credit hours in one of these fields of study (*or* in fields of study in the Division of Natural Sciences, the Division of Social Sciences, or the College of Education) *in addition to* courses listed in the schedule of minimum requirements above. At least 9 of these hours shall be taken in courses listed for advanced undergraduates and graduates.

Students in this Division may combine philosophy and psychology to form a minor; or combine courses offered by the various departments in the Division of Natural Sciences.

General Regulations

In addition to the special requirements of the Division and the major department, the student must satisfy the general requirements of the University. See pages 49-50. Attention is also called to the separate pamphlet entitled Academic Regulations.

Advisers

The student shall consider the head of his major department his special adviser, and shall consult him about the arrangement of his schedule and any other matters in which he may need advice. The Chairman of the Division shall determine each student's load, in conformity with the regulations of the Division.

Normal Load

The normal load in the junior and senior years shall be 15 hours per semester. With the permission of the Chairman of the Division, the load may be increased to 17 hours, an absolute maximum except for honor students. The load of honor students shall lie within the discretion of the Division, which shall pass on each case individually.

THE DIVISION OF NATURAL SCIENCES

The Division of Natural Sciences is composed of the departments of Chemistry, Geology, Mathematics, Physics, and Zoology of the College of Arts and Sciences, and the associated departments of Bacteriology, Botany, and Entomology in other colleges of the University.

Since a knowledge of natural science is deemed essential to any well-rounded education, all students in the University are required to pursue at least one year's study in one or more of its fields. In its curricula, each requiring four years for completion, this Division prepares students for the degree of Bachelor of Science. Its graduates are prepared to occupy posi-

tions as bacteriologists, botanists, chemists, entomologists, mathematicians, physicists, zoologists, in commercial laboratories, employees in various branches of the Government service, patent examiners, technical salesmen, instructors in high schools and colleges, and as teachers or research assistants in universities. Students in the scientific pre-professional curricula are prepared for entrance to colleges of dentistry, medicine, and nursing.

The sciences have so grown and their applications have become so extensive that it is impossible to deal with all phases of any one of them in the four years of college study. For this reason a vital part of the work of the Division is in the form of graduate courses. In the work leading towards the Degree of Master of Science the student is to become acquainted with the general aspects of his chosen field. In preparation for the degree of Doctor of Philosophy the student is trained in methods of research which should enable him to add to human knowledge, undertake independent investigation in his science, or take charge of industrial developments. Courses for undergraduates and graduates in this division are described in another part of this catalogue.

Specific Requirements

Requirements for Entering the Division of Natural Sciences

A student is eligible to enter his major or minor work in the Division when he has obtained fifty-eight semester hours of academic work (exclusive of physical education or military science) to his credit, with an average grade of C. He must also have an average as high as C in his major department. This rule applies also to students following special curricula in any of the science outlines.

The following minimum requirements should be completed, as far as possible, before the beginning of the junior year, and must be completed before graduation.

A. A student selecting his curriculum in this Division must complete a minimum of 126 credits (including the basic requirements in military science or physical education), in accordance with the requirements listed below, (B), (C), (D).

B. Specific Minimum Requirements.

Each student must fulfill from the following groups 66 semester credits of work, as specified in each group.

1. English and Speech, 14 semester hours. This must include the required course in Survey and Composition I and two hours of Speech.

2. Foreign Languages and Literature, 12 semester hours (or equivalent) in one language. In satisfaction of this requirement, college credit of 6 semester hours is allowed for two units of credit in any one language offered for entrance. At least a year of scientific reading in the language must be included.

3. Economics, Education, History, Political Science, Psychology, and Sociology, 12 semester hours.

4. Biology, Chemistry, Mathematics, and Physics, 25 semester hours. These shall include Chemistry, Mathematics, Physics, and Biology.

This requirement may be modified for General Science students to include any two of the four basic sciences, and electives taken in the Humanities and the Social Sciences.

5. Military Science or Physical Education, 6 semester hours.

C. Major and Minor Requirements.

At the beginning of the junior year, the general science student must select a major in one of the fields of study offered by the Division, and a minor in some related field.

A major shall consist, in addition to the specific requirements, of no fewer than 16 nor more than 24 semester hours in the field of study selected. At least 8 of these hours must be in courses offered for advanced students, or courses in the 100 group.

In addition to the specific requirements, a minor shall consist of no fewer than 8 nor more than 18 semester hours in another field of study. At least 6 of these credit hours must be in the 100 group.

Not more than 15 semester hours may be taken in any field of study other than the major or minor in addition to the specific requirements.

General Requirements

In addition to the special requirements of the Division and the major department, the student must satisfy the general requirements of the University. See pages 49-50. Attention is also called to the separate pamphlet entitled Academic Regulations.

Advisers

The student must consider the head of his major department his special adviser, and shall consult him about the arrangement of his outline of courses and any other matters in which he may need advice.

Normal Load

The normal load in the junior and senior years shall be 15 hours per semester. With the permission of the Chairman of the Division, the load may be increased to 17 hours, an absolute maximum except for honor students. The load of honor students shall lie within the discretion of the Division, which shall pass on each case individually.

FIELDS OF STUDY

Bacteriology

Bacteriology offers training in general, pathogenic, dairy, and sanitary bacteriology, and prepares students for positions in federal, state, public health, research, and commercial bacteriological laboratories. For the four year outline of study in Bacteriology, see College of Agriculture, page 71.

Botany

Botany offers students an opportunity for training for positions as teachers, and investigational workers in state or governmental experiment stations, for governmental inspection work, or for the various vocations involving botanical applications. For the four year outline of study in Botany, see College of Agriculture, page 72.

Chemistry

The Department of Chemistry includes Agricultural, Analytical, Industrial, Inorganic, Organic, and Physical Chemistry, together with the State Control Work.

Courses in these branches of Chemistry are arranged with a view to contributing toward the liberal education of the student in Arts and Sciences; the laying of the scientific foundation necessary for the professions of medicine, dentistry, pharmacy, engineering, and agriculture; and the training of students for careers in chemistry.

Curricula

It should be noted that the chemistry curricula hereinafter outlined are designed to insure adequate instruction in the fundamentals of chemistry, as well as to meet the specific requirements of the Division. At the same time, it has been considered desirable to preserve as high a degree of flexibility as possible, in order to afford the student who has a definite end in view as regards chemistry an opportunity to fit his course to his actual needs. In general it may be said that the curricula offered prepare students to enter the following fields:

1. General Chemistry: Here the student is offered a liberal selection of subjects in the arts and sciences. Through coöperation with the College of Education, he may so supplement this basic outline with work in Education as to meet the requirements for the State high school teacher's certificate. To prepare for college teaching, one requires graduate study leading to a higher degree.

2. Industrial Chemistry: If the student wishes to prepare himself for the chemical industry or, by further study, chemical engineering, he will elect mechanical drawing in the first year, and advanced mathematics and physics and industrial chemistry in the third and fourth years.

3. Biological Chemistry (Agricultural Chemistry): The object of this curriculum is to provide training for students desiring to prepare for the application of chemistry in the fields of agriculture and biology. This is accomplished by electing zoology and botany in the first year and additional courses in biology and physiological chemistry in the third and fourth years.

4. Chemical Research: Preparation for research and graduate study in chemistry is also based upon the preceding curricula. For advanced study, it is advisable that election be made largely from courses in chemistry and the allied sciences. The graduate outline offered by the Department of Chemistry is found in detail in the catalogue of the Graduate School.

The Chemistry Curriculum Outline Suggested

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| French or German (French 1y or German 1y)..... | 3 | 3 |
| College Algebra and Analytic Geometry (Math. 11f and 14s)..... | 3 | 3 |
| General Chemistry (Chem. 1y)..... | 4 | 4 |
| Electives | 4 | 4 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)..... | 1 | 1 |
| Freshman Lectures | — | — |
| | 18 | 18 |
| <i>Sophomore Year</i> | | |
| Survey and Composition II (Eng. 2f and 3s)..... | 3 | 3 |
| Scientific French or German (French 3y or German 3y)..... | 3 | 3 |
| Calculus (Math. 16y)..... | 3 | 3 |
| Qualitative Analysis (Chem. 2y)..... | 3 | 3 |
| Elementary Organic Chemistry (Chem. 8Ay and 8By)..... | 3 | 3 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)..... | 2 | 2 |
| | — | — |
| | 18 | 18 |
| <i>Junior Year</i> | | |
| Quantitative Analysis (Chem. 6y)..... | 4 | 4 |
| Advanced Organic Chemistry (Chem. 116y and 117y)..... | 3 | 3 |
| General Physics (Phys. 2y)..... | 5 | 5 |
| Electives (Arts and Sciences or Education)..... | 3 | 3 |
| | — | — |
| | 15 | 15 |
| <i>Senior Year</i> | | |
| Physical Chemistry (Chem. 102y)..... | 5 | 5 |
| Electives (Arts and Sciences or Education)..... | 10 | 10 |
| | — | — |
| | 15 | 15 |

Entomology

This department offers training in entomology for future work in pest control, and in the preparation of technically trained entomologists. For the four year outline of study in entomology see College of Agriculture, page 76.

General Science

For the benefit of such students as desire a general basic knowledge of the natural sciences without immediate specialization in any one of them, a general curriculum may be arranged.

By a proper selection of electives a student upon completion of the course would be eligible to pursue graduate work in any department of the Division.

If electives be properly chosen in the educational field, a prospective teacher of general science or of any of the specific sciences included in the Division may obtain a state teacher's certificate, and in turn be prepared to pursue graduate work in Education.

Mathematics

The department of Mathematics offers a curriculum of study based on the recognition of four distinct categories of students to whom mathematics is taught:

A. To students who regard mathematics as but a part of the cultural equipment acquired in college, who have little or no interest in the technical aspects of the subject, but desire to know the place which mathematics occupies in the general scheme of things, the department offers an orientation course in mathematics (Math. 10s). Courses 111f and 112s have also been devised to meet such requirements.

B. To students who need a rudimentary knowledge of mathematics in order that they may understand its application to such fields as physics, thermodynamics, statistics, etc., the department offers basic courses in algebra, trigonometry, and analytic geometry.

C. To prospective engineers, industrial chemists, statisticians, and others who have chosen professions where mathematics is an indispensable aid to design and research, the department, in addition to the basic work outlined above, offers courses in calculus, pure and applied, and elementary differential equations. Moreover, such students, upon completion of these basic studies, will be equipped to enter many of the advanced special courses listed elsewhere in this catalogue.

D. Finally, there are students who have chosen mathematics for a career, with the view either of teaching the subject or of engaging in mathematical investigation. The department has designed for such students a comprehensive curriculum of study, leading towards the degrees of Bachelor of Arts and Master of Arts. Prospective candidates for such degrees will be expected to acquire during their college career a well balanced education; they are, therefore, urged to apply as early as possible to the head of the department for a comprehensive outline of study. A typical schedule of the kind is the following:

The Mathematics Curriculum

| Outline Suggested | Semester | |
|--|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| French or German (French 1y or German 1y)..... | 3 | 3 |
| College Algebra, Trigonometry, and Analytic Geometry (Math. 11f, 12f, 14s, and 15s)..... | 4 | 4 |
| Geometrical Drawing and Modeling (Math. 18y)..... | 1 | 1 |
| General Chemistry (Chem. 1y)..... | 4 | 4 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)..... | 1 | 1 |
| Freshman Lectures | — | — |
| | 16 | 16 |
| <i>Sophomore Year</i> | | |
| Survey and Composition II (Eng. 2f and 3s)..... | 3 | 3 |
| French or German (French 3y or German 3y)..... | 3 | 3 |
| Calculus (Math. 16y and 17y)..... | 4 | 4 |
| Advanced Geometrical Drawing and Modeling (Math. 19y)..... | 1 | 1 |
| General Physics (Phys. 2y)..... | 5 | 5 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)..... | 2 | 2 |
| | — | — |
| | 18 | 18 |
| <i>Junior Year</i> | | |
| Plane Curves (Math. 125f)..... | 2 | — |
| Advanced Topics in Calculus (Math. 127f)..... | 2 | — |
| History of Mathematics (Math. 122s)..... | — | 2 |
| Advanced Differential Equations (Math. 128s)..... | — | 2 |
| Physical Chemistry (Chem. 102Ay)..... | 3 | 3 |
| Advanced Physics (Phys. 106s or 108s)..... | — | 3 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| Biology | 3 | — |
| Electives (History, Sociology, or Economics)..... | 4 | 4 |
| | — | — |
| | 15 | 15 |
| <i>Senior Year</i> | | |
| Electives (Mathematics and Astronomy)..... | 4 | 4 |
| Seminar and Dissertation (Math. 140y)..... | 1 | 1 |
| Advanced Physics (Phys. 109y)..... | 3 | 3 |
| Education (Ed. Psych. 1f, and Ed. 5s and 6s)..... | 2 | 3 |
| Electives (Philosophy, Logic, etc.)..... | 5 | 4 |
| | — | — |
| | 15 | 15 |

Physics

The courses in Physics are designed to provide the Arts student with a knowledge of the basic principles of his physical world and an insight to the functioning of a quantitative science; to lay some of the scientific foundation for the structures of dentistry, engineering, home economics, medicine, pharmacy, etc.; to prepare prospective teachers and instructors for high schools and colleges; to train students, specifically interested in physics, for positions in experimental and research physical laboratories (collegiate, governmental, and industrial).

The curriculum given here is intended for the student who, on entering the University, has chosen to do his major work in physics. Any student completing this curriculum will be prepared for graduate study in physics, or, by a proper selection of the electives in his senior year, for graduate work in chemistry or mathematics.

If the electives in the senior year be chosen in the Education field, the student can meet the requirements for the state high school teacher's certificate, and, with additional graduate work in Education, be eligible for a Master's degree in Education.

Students who have met the specific requirements in chemistry, mathematics, and physics as outlined in Group B-3, and have completed calculus and plane analytic geometry (Math. 5y) may, with the consent of the head of the department, on the completion of such additional work as may be deemed individually necessary, select a major in physics.

Students desiring some knowledge of advanced physics from a liberal education point of view may elect Phys. 103y.

The Physics Curriculum Outline Suggested

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| French or German (French 1y or German 1y)..... | 3 | 3 |
| College Algebra, Trigonometry, and Analytic Geometry (Math. 11f, 12f, 14s and 15s)..... | 4 | 4 |
| General Chemistry (Chem. 1y)..... | 4 | 4 |
| Engineering Drafting (Dr. 1y)..... | 1 | 1 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)..... | 1 | 1 |
| Freshman Lectures | — | — |
| | 16 | 16 |

Sophomore Year

| | | |
|---|----|----|
| Survey and Composition II (Eng. 2f and 3s)..... | 3 | 3 |
| Scientific French or German (French 3y or German 3y)..... | 3 | 3 |
| Calculus (Math. 16y and 17y)..... | 4 | 4 |
| General Physics (Phys. 2y)..... | 5 | 5 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)..... | 2 | 2 |
| | — | — |
| | 18 | 18 |

Junior Year

| | | |
|--|----|----|
| Electives | 4 | 4 |
| Advanced Topics in Calculus (Math. 127f)..... | 2 | — |
| Advanced Differential Equations (Math. 128s)..... | — | 2 |
| Advanced Physics (Phys. 101f, 102s, 105f, 109y)..... | 6 | 3 |
| Qualitative Analysis (Chem. 2y)..... | 3 | 3 |
| Elective in Biology | — | 3 |
| | — | — |
| | 15 | 15 |

Senior Year

| | | |
|--|----|----|
| Physical Chemistry (Chem. 102Ay)..... | 3 | 3 |
| Advanced Physics (Phys. 101f, 102s, 105f, 109y)..... | 3 | 3 |
| Elective | 9 | 9 |
| | — | — |
| | 15 | 15 |

Zoology

The curriculum of the department of Zoology is designed to meet two general needs: cultural and professional.

Zoology, a life science, has a cultural value for those who wish to understand the living world and man's relation to it. It provides the fundamental training in biology necessary for future study in the fields of medicine, dentistry, and nursing; and provides the background for an understanding of the human body and its activities.

With the selection of certain courses in the College of Education, a student whose major is zoology may obtain a state teacher's certificate, qualifying him to teach in secondary schools of Maryland.

The subject matter of certain courses is of a character which qualifies the student for service in the several biological bureaus of the United States Government or the biological departments of Maryland and other states.

The courses offered for graduates thoroughly ground the student in the methods of teaching and research in vertebrate morphology, physiology, hydrobiology, and ecology, with special reference to marine biology. Departmental facilities for the latter work are supplemented by those of the Chesapeake Biological Laboratory. (See page 299.)

The Zoology Curriculum

| Outline Suggested | Semester | |
|---|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| Invertebrate Morphology (Zool. 3f)..... | 4 | — |
| Comparative Vertebrate Morphology (Zool. 4s)..... | — | 4 |
| General Botany (Bot. 1f and 2s)..... | 4 | 4 |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| College Algebra, Trigonometry, and Analytic Geometry (Math. 11f and 14s)..... | 3 | 3 |
| French or German (French 1y or German 1y)..... | 3 | 3 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)..... | 1 | 1 |
| Freshman Lectures | — | — |
| | 18 | 18 |
| <i>Sophomore Year</i> | | |
| Animal Histology (Zool. 12f)..... | 3 | — |
| Vertebrate Embryology (Zool. 20s)..... | — | 3 |
| General Chemistry (Chem. 1y)..... | 4 | 4 |
| Survey and Composition II (Eng. 2f and 3s)..... | 3 | 3 |
| Scientific French or German (French 3y and German 3y)..... | 3 | 3 |
| Electives | 2 | 2 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)..... | 2 | 2 |
| | 17 | 17 |
| <i>Junior Year</i> | | |
| Comparative Embryology (Zool. 100f)..... | 3 | — |
| Invertebrate Zoology (Zool. 108f)..... | 3 | — |
| Vertebrate Zoology (Zool. 109s)..... | — | 3 |
| Animal Genetics (Zool. 120f)..... | 3 | — |
| General Physics (Phys. 1y)..... | 4 | 4 |
| Electives | 2 | 8 |
| | 15 | 15 |
| <i>Senior Year</i> | | |
| Journal Club (Zool. 106f and 107s)..... | 1 | 1 |
| General Animal Physiology (Zool. 103f and 104s)..... | 3 | 3 |
| Electives | 11 | 11 |
| | 15 | 15 |

Those who intend to qualify for the teacher's certificate must elect Ed. 2f and 3s in the sophomore year and elect 16 additional hours during the junior and senior years in courses prescribed by the College of Education.

THE PRE-PROFESSIONAL CURRICULA

Pre-Medical

The minimum requirement for admission to the School of Medicine of the University of Maryland is two years of academic training in the College of Arts and Sciences. The subjects prescribed by the Council on Medical Education of the American Medical Association are covered in the first two years of the Pre-Medical Curriculum. In view of the fact, however, that at least five times as many students, most of whom have a baccalaureate degree, apply for admission to the School of Medicine of the University as can be accommodated, students are strongly urged to complete the full three-year curriculum before making application for entrance.

Preference will be given students requesting entrance to the School of Medicine of the University who present the credits obtained by the successful completion of the three-year curriculum or its equivalent of 96 semester hours. For recommendation by the Pre-Medical Committee, a student must complete the curriculum with an average grade of B or above, and must also satisfy the Committee that he is qualified by character and scholarship to enter the medical profession. Only in exceptional cases will students who have been less than two years in residence at College Park be recommended for admission to the School of Medicine.

Another advantage the three-year curriculum offers over the minimum requirement of 67 hours is, that the students who successfully complete this program may, on the recommendation of the Dean of the School of Medicine, be awarded the degree of Bachelor of Science after the completion of the first year's work in the Medical School. This combined program of seven years leads to the degree of Doctor of Medicine upon the completion of the full course. The first three years are taken in residence at College Park, and the last four in Baltimore in the School of Medicine. At least two years of residence at College Park is necessary for students transferring from other colleges and universities who wish to become candidates for the combined degrees.

For requirements for admission see Section I, Entrance.

| The Curriculum | Semester | |
|---|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Mathematics (Math. 8f and 10s or 11f and 14s)..... | 3 | 3 |
| Invertebrate Morphology (Zool. 3f)..... | 4 | — |
| Comparative Vertebrate Morphology (Zool. 4s)..... | — | 4 |
| General Chemistry (Chem. 1y)..... | 4 | 4 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)..... | 1 | 1 |
| Freshman Lectures | — | — |
| | 16 | 16 |

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Sophomore Year</i> | | |
| General Physics (Phys. 1y)..... | 4 | 4 |
| Elementary Organic Chemistry (Chem. 8Ay and 8By)..... | 3 | 3 |
| French or German | 3 | 3 |
| Animal Histology (Zool. 12f)..... | 3 | — |
| Elements of Psychology (Psych. 1s)..... | — | 3 |
| Survey and Composition II (Eng. 3f and 4s)..... | 3 | 3 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)..... | 2 | 2 |
| | — | — |
| | 18 | 18 |

| | | |
|--|----|----|
| <i>Junior Year</i> | | |
| Rural Sociology (Soc. 101f)..... | 2 | — |
| Urban Sociology (Soc. 102s)..... | — | 2 |
| Elementary Physical Chemistry (Chem. 10y)..... | 3 | 3 |
| Electives: General Bacteriology (Bact. 1f or s), Quantitative Analysis (Chem. 4f or s), General Physiological Chemistry (Chem. 108s), Zoology..... | 4 | 4 |
| Electives (Humanities and Social Sciences)..... | 6 | 6 |
| | — | — |
| | 15 | 15 |

Senior Year

The curriculum of the first year of the School of Medicine. The student also may elect the fourth year's work from advanced courses offered in the College of Arts and Sciences. In either case the Specific Requirements of the Division of Natural Sciences for graduation must have been met.

Pre-Dental

Students entering the College of Arts and Sciences desiring to prepare themselves for the study of Dentistry are offered the following two-year outline, which meets the pre-dental requirements of the American Association of Dental Colleges. This outline can also be used by the student if he desires to continue his college training and complete work for the Bachelor of Science degree.

The Curriculum

| | | |
|---|----|----|
| <i>Freshman Year</i> | | |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| Mathematics (Math. 8f and 10s or 11f and 14s)..... | 3 | 3 |
| General Chemistry (Chem. 1y)..... | 4 | 4 |
| Invertebrate Morphology (Zool. 3f)..... | 4 | — |
| Comparative Vertebrate Morphology (Zool. 4s)..... | — | 4 |
| Drawing | 1 | 1 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)..... | 1 | 1 |
| Freshman Lectures | — | — |
| | — | — |
| | 17 | 17 |

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Sophomore Year</i> | | |
| Elementary Organic Chemistry (Chem. 8Ay)..... | 2 | 2 |
| Elementary Organic Chemistry (Chem. 8By)..... | 1 | 1 |
| General Physics (Phys. 1y)..... | 4 | 4 |
| Electives (Social Sciences and Arts)..... | 5 | 5 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)..... | 2 | 2 |
| French or German..... | 3 | 3 |
| | — | — |
| | 17 | 17 |

Five-Year Combined Arts and Nursing Curriculum

The first two years of this course are taken in the College of Arts and Sciences at College Park. If students enter this combined program with advanced standing, at least the second full year of the course must be completed in College Park. This course is prerequisite, and cannot be taken after the Diploma in Nursing is granted.

The remaining three years are taken in the School of Nursing in Baltimore or in the Training School of Mercy Hospital, Baltimore. In addition to the Diploma in Nursing, the degree of Bachelor of Science may, upon the recommendation of the Director of the School of Nursing, be granted at the end of the five-year course. Full details regarding this course may be found in the section of the catalogue dealing with the School of Nursing.

The Curriculum

Freshman Year

| | | |
|---|----|----|
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Foreign Language | 3 | 3 |
| General Chemistry (Chem. 1y)..... | 4 | 4 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| History (H. 1y, 2y, or 3y)..... | 3 | 3 |
| State Government (Pol. Sci. 4s)..... | — | 2 |
| Library Methods (L. S. 1f)..... | 1 | — |
| Physical Education (Phys. Ed. 2y and 4y)..... | 1 | 1 |
| Freshman Lectures | — | — |
| | — | — |
| | 16 | 17 |

Sophomore Year

| | | |
|---|---|---|
| Expository Writing (Eng. 5f and 6s)..... | 2 | 2 |
| Principles of Sociology (Soc. 1f)..... | 3 | — |
| Elements of Psychology (Psych. 1s)..... | — | 3 |
| Fundamentals of Economics (Econ. 5s)..... | — | 3 |
| General Bacteriology (Bact. 1As)..... | — | 2 |
| General Zoology (Zool. 1f)..... | 4 | — |

| | Semester | |
|---|----------|----|
| | I | II |
| Foods (H. E. 31y)..... | 3 | 3 |
| Nutrition (H. E. 131f)..... | 3 | — |
| Child Nutrition (H. E. 136s)..... | — | 2 |
| Physical Education (Phys. Ed. 6y and 8y)..... | 2 | 2 |
| | — | — |
| | 17 | 17 |

THE DIVISION OF SOCIAL SCIENCES

This Division has charge of students who elect their major work in the departments of Economics and Business Administration, History, Political Science, Psychology, and Sociology. It also provides minor courses of study for students who take major work in this or other Divisions or Colleges.

Requirements for Entering the Division of Social Sciences

A student becomes eligible to do major or minor work in the Division of Social Sciences when he has fifty-eight semester hours of academic work (exclusive of military science or physical education) with an average of C or above. He must also have an average as high as C in the field which he selects for his major work.

Major and Minor Requirements

At the beginning of the junior year students entering the social sciences must select a major from one of the fields indicated below. The minor may be selected from any field in the College of Arts and Sciences or the College of Education.

Fields

| | |
|------------------------|-------------------|
| Accounting and Finance | Political Science |
| Economics | *Psychology |
| History | Sociology |

A major shall consist of not fewer than 18 semester hours in one of the above fields of study. At least 10 of these hours must be in the courses listed for Advanced Undergraduates and Graduates.

A minor shall consist of not fewer than 10 semester hours in one of the above fields of study, or in any field of study in the College of Arts and Sciences or in the College of Education. At least 6 of the hours must be in courses listed for Advanced Undergraduates and Graduates. The courses constituting the minor must conform to the requirements of the department in which the major work is done.

*Psychology may be chosen for minor work, or combined with Philosophy to form a major.

General Requirements

- A. Military Science or Physical Education, six hours.
- B. General Division Requirements:

I. *Humanities* (English, Foreign Languages and Literature, Philosophy, and Speech.)

1. *English and Speech*—14 semester hours. These courses must include the required course in Survey and Composition I and two hours in Speech.
2. *Foreign Languages and Literature*—12 semester hours (or equivalent) in any one language. In satisfaction of this requirement, college credit of 6 semester hours will be allowed for two units of credit in any one language offered for entrance.

II. *Biological and Physical Sciences* (Chemistry, Geology, Mathematics, Physics, and Zoology.)

A minimum requirement of 12 semester hours in this group.

III. *Social Sciences* (Economics, History, Political Science, Psychology, and Sociology.)

A minimum requirement of 12 semester hours in this group.

At least 126 semester hours are required for graduation.

Advisers

The student shall consider the head of his major department his special adviser, and shall consult him about the arrangement of his schedule and any other matters in which he needs advice. In making out schedules the adviser is expected to limit the number of hours to a maximum of sixteen per semester, with fifteen hours considered as a normal load. With the permission of the division as a whole, the load may, in exceptional cases, be increased to eighteen hours in a given semester. The maximum amount of work to be carried by an honor student shall be determined by the division, which shall pass on each individual case.

BUSINESS ADMINISTRATION

The aim of these curricula is to afford those who have chosen business as a career a training in the general principles of business, because men who seek advancement must be broadly trained and not merely drilled in specific routine. Both curricula combine a program of cultural development with the valuable mental discipline involved in a study of the best business methods and technic. Curriculum I is provided to meet the needs of students who desire a general training; but for students who seek more highly specialized work in accounting and finance, Curriculum II is suggested.

Curriculum I

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Science (Botany, Chemistry, Zoology)..... | 4 | 4 |
| Modern Language | 3 | 3 |
| Algebra (Math. 8f or 11f)..... | 3 | — |
| Economic Geography and Industry (Econ. 1f)..... | 3 | — |
| History of World Commerce (Econ. 2s)..... | — | 3 |
| American National Government (Pol. Sci. 1s)..... | — | 3 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)..... | 1 | 1 |
| Freshman Lectures | — | — |
| | 17 | 17 |
| <i>Sophomore Year</i> | | |
| American History (H. 2y)..... | 3 | 3 |
| Principles of Economics (Econ. 3y)..... | 3 | 3 |
| Survey and Composition II (Eng. 2f)..... | 3 | — |
| Business English (Eng. 4s)..... | — | 2 |
| Principles of Accounting (A. and F. 9y)..... | 4 | 4 |
| Business Organization and Operation (Econ. 7f)..... | 2 | — |
| Elements of Psychology (Psych. 1s)..... | — | 3 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)..... | 2 | 2 |
| | 17 | 17 |
| <i>Junior Year</i> | | |
| Experimental Psychology (Psych. 102f)..... | 3 | — |
| Business Law (A. and F. 107y)..... | 3 | 3 |
| Money and Credit (Econ. 101f)..... | 2 | — |
| Banking (Econ. 102s)..... | — | 2 |
| Inland Transportation (Econ. 112s)..... | — | 3 |
| Mathematical Theory of Investment (Math. 101f)..... | 3 | — |
| Elements of Statistics (Gen. 114s)..... | — | 3 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| *Electives | 3 | 3 |
| | 15 | 15 |
| <i>Senior Year</i> | | |
| Corporation Finance (Econ. 103f)..... | 2 | — |
| Investments (A. and F. 104s)..... | — | 3 |
| Insurance (Econ. 105f)..... | 2 | — |
| Public Finance (Econ. 114s)..... | — | 3 |
| Public Utilities (Econ. 113f)..... | 2 | — |
| Personnel Management (A. and F. 106s)..... | — | 1 |
| Extempore Speaking (Speech 7f)..... | 1 | — |
| *Electives | 8 | 8 |
| | 15 | 15 |

*Electives must be chosen first to fulfill the common requirements for graduation. At least 6 hours each year must be elected from Accounting and Finance or Economics.

Curriculum II

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Science (Botany, Chemistry, Zoology)..... | 4 | 4 |
| Modern Language | 3 | 3 |
| Algebra (Math. 8f or 11f)..... | 3 | — |
| Economic Geography and Industry (Econ. 1f)..... | 3 | — |
| History of World Commerce (Econ. 2s)..... | — | 3 |
| American National Government (Pol. Sci. 1s)..... | — | 3 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)..... | 1 | 1 |
| Freshman Lectures | — | — |
| | 17 | 17 |
| <i>Sophomore Year</i> | | |
| American History (H. 2y)..... | 3 | 3 |
| Principles of Economics (Econ. 3y)..... | 3 | 3 |
| Survey and Composition II (Eng. 2f)..... | 3 | — |
| Business English (Eng. 4s)..... | — | 2 |
| Principles of Accounting (A. and F. 9y)..... | 4 | 4 |
| Business Organization and Operation (Econ. 7f)..... | 2 | — |
| Elements of Psychology (Psych. 1s)..... | — | 3 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)..... | 2 | 2 |
| | 17 | 17 |
| <i>Junior Year</i> | | |
| Experimental Psychology (Psych. 102f)..... | 3 | — |
| Business Law (A. and F. 107y)..... | 3 | 3 |
| Money and Credit (Econ. 101f)..... | 2 | — |
| Banking (Econ. 102s)..... | — | 2 |
| Advanced Accounting (A. and F. 110y)..... | 3 | 3 |
| Auditing (A. and F. 126s)..... | — | 2 |
| Mathematical Theory of Investment (Math. 101f)..... | 3 | — |
| Elements of Statistics (Gen. 114s)..... | — | 3 |
| Personnel Management (A. and F. 106s)..... | — | 1 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| | 15 | 15 |
| <i>Senior Year</i> | | |
| Corporation Finance (Econ. 103f)..... | 2 | — |
| Investments (A. and F. 104s)..... | — | 3 |
| Cost Accounting (A. and F. 121f and 122s)..... | 2 | 2 |
| Income Tax Accounting (A. and F. 124s)..... | — | 3 |
| Public Utilities (Econ. 113f)..... | 2 | — |
| Insurance (Econ. 105f)..... | 2 | — |
| *Electives | 7 | 7 |
| | 15 | 15 |

*Electives must be chosen first to fulfill the common requirements for graduation.

COMBINED PROGRAM IN ARTS AND LAW

The School of Law of the University requires two years of academic credit for admission to the school, or sixty semester hours of college credit.

The University offers a combined program in Arts and Law, leading to the degrees of Bachelor of Arts and Bachelor of Laws. Students pursuing this combined program will spend the first three years in the College of Arts and Sciences at College Park. During this period they will complete the prescribed curriculum in pre-legal studies as outlined below, and must complete the common Requirements for Graduation, as indicated elsewhere. If students enter the combined program with advanced standing, at least the third full year's work must be completed in residence at College Park. Upon the successful completion of one year of full-time law courses in the School of Law in Baltimore, the degree of Bachelor of Arts may be awarded on the recommendation of the Dean of the School of Law. The degree of Bachelor of Laws will be awarded upon the completion of the combined program.

Semester I II

Freshman Year

| | | |
|---|-------|-------|
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Science or Mathematics..... | 4-3 | 4-3 |
| History of England and Greater Britain (H. 3y)..... | 3 | 3 |
| Introduction to the Social Sciences (Soc. Sci. 1y)..... | 3 | 3 |
| Foreign Language | 3 | 3 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)..... | 1 | 1 |
| Freshman Lectures | — | — |
| | 16-17 | 16-17 |

Sophomore Year

| | | |
|---|----|----|
| Expository Writing (Eng. 5f and 6s)..... | 2 | 2 |
| Principles of Economics (Econ. 3y)..... | 3 | 3 |
| American History (H. 2y)..... | 3 | 3 |
| American National Government (Pol. Sci. 1f)..... | 3 | — |
| Elements of Psychology (Psych. 1s)..... | — | 3 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)..... | 2 | 2 |
| *Electives | 3 | 3 |
| | 17 | 17 |

*Electives should be in English, history, Latin, or modern languages, economics or political science, or some of the common requirements for graduation.

Junior Year

Largely electives, including the completion of the General Requirements for Graduation as outlined on Page 107.

Senior Year

First year of regular law course.

Students who are unable to take the combined program in Arts and Law may fulfill the entrance requirements of the School of Law by completing the first two years of pre-legal studies as outlined in the above combined course.

COLLEGE OF EDUCATION

WILLARD S. SMALL, *Dean*.

The College of Education is organized to meet the needs of the following classes of students: (1) undergraduates preparing to teach the cultural and the vocational studies in the high schools, preparatory schools, and vocational schools; (2) students who will enter higher institutions to prepare for work in specialized educational and institutional fields; (3) students preparing for educational work in the trades and industries; (4) students preparing to become county agents, home demonstrators, boys' and girls' club leaders, other extension workers, and social workers; (5) students whose major interest is in other fields, but who desire courses in education for their informational and cultural values; (6) advanced students preparing to become high school principals, elementary school principals, educational supervisors, attendance officers, and school administrators.

The Summer Session, although organically distinct from the College of Education, is administered by the Dean of the College of Education, and is in effect an administrative division of the College.

Departments

The instructional work of the College of Education is conducted by the following functional divisions: History and Principles of Education, Educational Psychology, Methods in High School Subjects, Agricultural Education, Home Economics Education, Industrial Education, Commercial Education, and Physical Education.

Requirements for Admission

The requirements for admission to the College of Education are in general the same as for the other colleges of the University. See Section I, Entrance.

For additional requirements for admission to the curriculum in Agricultural Education, see page 120.

Candidates for admission whose high school records are consistently low are strongly advised not to seek admission to the College of Education.

Admission of Normal School Graduates

Graduates of the two- and three-year curriculums of the Maryland Normal Schools and other accredited normal schools whose scholastic records in the respective normal schools were satisfactory, will be admitted to advanced standing and classified provisionally in the appropriate classes. Graduates of the two-year normal school curriculum, in most cases, may

satisfy the requirements for the degree of Bachelor of Science in Elementary Education by attendance for two full college years; graduates of the three-year curriculum, by attendance for one full college year.

Those who wish to satisfy the requirements for certification as high school teachers need more time. The amount of time required is not uniform, but depends upon the high school subjects to be taught and the individual ability of the student.

For detailed information, one should apply to the Dean of the College of Education.

Night Courses for Teachers

A program of Night Courses for Teachers is offered at College Park. For fees for such courses, see Fees for Part-time Students, page 52. A special circular describing this program is issued in September, and may be had by applying to the Registrar, College Park, Maryland.

Degrees

The degrees conferred upon students who have met the conditions prescribed for a degree in the College of Education are Bachelor of Arts and Bachelor of Science. Upon completion of 128 credits in conformity with the requirements specified under Curricula and in conformity with the general requirements of the University, the appropriate degree will be conferred.

Teacher's Special Diploma

The Teacher's Special Diploma is not awarded to all students who satisfy the requirements for graduation. It is awarded, at the time of graduation, to students whose quality of scholarship, personal traits, successful practice teaching, and professional attitude indicate distinct promise of success as teachers. Each award is by vote of the Faculty of the College of Education.

This diploma is not required by official certificating authorities.

A graduate who, at the time of graduation, is not eligible for this award, may be awarded the Teacher's Special Diploma upon presentation of evidence of a year or more of successful teaching experience.

Teachers' special diplomas are granted in the Biological Sciences, Chemistry, English, French, General High School Science, History and Social Sciences, Mathematics, Mathematics-Physics, Vocational Agriculture, Vocational Home Economics, Industrial Education, Commercial Education, and Physical Education.

Facilities

In addition to the general facilities offered by the University, certain important supplementary facilities are available.

Supervised Teaching. Actual experience in teaching under competent supervision is of basic importance in the preparation of teachers. Since

1920 a coöperative arrangement with the Prince Georges County School authorities has been in effect whereby students preparing to teach get this experience in the Hyattsville High School. This arrangement is supplemented by opportunities for supervised teaching in the high schools of Montgomery County and Howard County and in the junior and senior high schools of the District of Columbia.

Observation. The observation of teaching necessary for efficient teacher training is conducted in Washington and in nearby Maryland schools. The number, variety, and nearness of these schools provide ample and unusual opportunities for observation of actual classroom situations.

Other Facilities in Washington. The Library of Congress, the Library of the U. S. Office of Education, and the special libraries of other Government offices are accessible. The information services of the National Education Association, the American Council on Education, the U. S. Office of Education, and of other institutions, public and private, are available to students.

Curricula

The departments of the College of Education fall into two main groups: General Education and Vocational Education. Two types of curricula are offered, corresponding with these two major groupings.

General Education. The first of these is designed to prepare teachers of academic and scientific subjects and the special subjects in high schools. The basic requirements are fixed and definite, but the student may select from a number of subjects the major and minor subjects in which he expects to qualify for teaching. One may qualify for the degree either of Bachelor of Arts or of Bachelor of Science, depending upon one's election of major subject.

The requirements for majors and minors (see Specific Requirements, page 118) satisfy the regulations of the State Department of Education in regard to "the number of college credits required in any two or more subjects which are to be placed on a high school teacher's certificate."

Some of the most common combinations of academic subjects in the high schools of the State are as follows: English and History; English and French; History and French; Mathematics and one or more of the high school Sciences.

Combinations of academic and scientific subjects with Physical Education, Home Economics, Industrial Arts, Commercial Subjects, and Music are desirable.

Vocational Education. The curricula in Vocational Education are designed for the definite purpose of preparing teachers of agriculture, home economics, and trade and industrial Education. As the University of Maryland is the institution designated by the State Board of Education for the training of teachers of vocational agriculture, home economics, and trades and industries under the provisions of the Smith-Hughes Vocational

Educational Act, the curricula in this class have been organized to meet the objectives set up in the act and in the interpretations of the Federal Board of Vocational Education and the State Board of Education. These curricula lead to the degree of Bachelor of Science.

Professional Requirements

The first two years of college work are preparatory to the professional work of the junior and senior years. Students who, in the first two years, by reason of temperament, health, industry, and scholastic progress, give promise of becoming successful teachers are encouraged to continue in the curricula of the College of Education; those who, by reason of health deficiencies, of weakness in oral and written English, and of unfavorable personal traits, are unlikely to succeed as teachers are advised to transfer to other fields.

Sophomore Status

The Introduction to Teaching scheduled for the sophomore year is an orientation course. It is designed with the twofold purpose of giving students a view of the teacher's job and of testing the aptitude and fitness of students for teaching. Admission to this course is based upon (1) completion of at least 30 semester hours of freshman work with a standing in the upper four-fifths of the class; and (2) passing of series of tests which are designed to determine the student's preparation for the special demands of this course.

Professional Courses

The professional courses recognized by the State Department of Education for certification are given only in the junior and senior years. The minimum requirement for these is 16 semester hours, and includes the following: Educational Psychology, Technic of Teaching, Observation of Teaching, Special Methods and Supervised Teaching, and Principles of Secondary Education. *To be eligible to enter the professional courses in the junior year, a student must have an average grade as high as C at the end of the sophomore year. Continuance in such courses will be contingent upon his maintaining an average grade as high as C; and a grade as high as C in each required professional course.*

The requirement of the District of Columbia of 24 semester hours of professional courses is fully met.

The special requirements of each curriculum are shown in the tabular statements of the curricula for the several departments.

Certification of High School Teachers

The State Department of Education certifies to teach in the approved high schools of the State only graduates of approved colleges who have satisfactorily fulfilled subject-matter and professional requirements. Specifically it limits certification to graduates who "rank academically in the upper four-fifths of the class and who make a grade of C or better in practice teaching."

Guidance in Registration

All students wishing to prepare for teaching should consult the Dean of the College of Education regarding possible combinations and the arrangement of their work. At the time of matriculation each student is assigned to a member of the faculty who acts as the student's personal adviser. Choice of subjects the student will prepare to teach should be made at the beginning of the sophomore year with the advice and approval of the appropriate heads of departments.

It is advisable for students who purpose to teach to register in the College of Education, in order that they may have continuously the counsel and guidance of the faculty which is directly responsible for their professional preparation. Such guidance is provided by regular monthly conferences of faculty and students, and by group and individual conferences between students and personal advisers. It is permissible, however, for a student to register in that college which in conjunction with the College of Education offers the majority of the courses he will pursue in satisfying the requirements of the curriculum he elects.

The teacher's special diploma will be awarded only to the student who shall have fulfilled all of the requirements of the curriculum he elects. Students in other colleges desiring to qualify for the teacher's special diploma should consult with the Dean of the College of Education *at the beginning of the sophomore year* in order to plan satisfactorily their subsequent programs. Adjustments may be made as late as the beginning of the junior year. *It is practically impossible to make adjustments later than that on account of the sequence of professional subjects in the junior and senior years.*

ARTS AND SCIENCE EDUCATION

Students electing this curriculum may register in the College of Arts and Sciences or in the College of Education. In either case they will register with the College of Education for the teacher's special diploma. Students will be certified for graduation only upon fulfillment of all the requirements of this curriculum.

General Requirements

In addition to Military Science or Physical Education, required of all students in the University, the following requirements must be fulfilled by all candidates for degrees in this curriculum, preferably by the end of the sophomore year:

(1) Survey and Composition I (Eng. 1y), 6 semester hours, and in addition not less than a year of work in English Language or Literature.

(2) Reading and Speaking (Speech 1y), 2 semester hours.

(3) Two years of foreign language, if the student enters with less than three years of foreign language; one year, if he enters with three years. No foreign language is required of students who enter with four or more years of foreign language.

(4) Twelve semester hours of history and the social sciences, of which six must be history.

(5) Twelve hours of natural science or of natural science and mathematics, including General Zoology (Zool. 1 f or s).

| | Semester | |
|---|----------|-------|
| | I | II |
| <i>Freshman Year</i> | | |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)..... | 1 | 1 |
| *Foreign Language | 3 | 3 |
| Science (Biological or Physical)..... | 4 | 4 |
| From the following groups: | | |
| History, Social Sciences, Mathematics, Science, Foreign Language | 3-4 | 3-4 |
| | — | — |
| | 15-16 | 15-16 |

| | | |
|---|-------|-------|
| <i>Sophomore Year</i> | | |
| (See Sophomore Status, p. 115) | | |
| Introduction to Teaching (Ed. 2f and 3s)..... | 2 | 2 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)..... | 2 | 2 |
| †Foreign Language | 3 | 3 |
| Electives | 10-11 | 10-11 |
| | — | — |
| | 17-18 | 17-18 |

| | | |
|--|----|----|
| <i>Junior Year</i> | | |
| (See Professional Courses, p. 115) | | |
| Educational Psychology (Ed. Psych. 1f)..... | 3 | — |
| Technic of Teaching (Ed. 5 s)..... | — | 2 |
| Special Methods (Ed. 120 s; 122 s; 124 s; 126 s; 128 s)..... | — | 2 |
| Electives | 13 | 12 |
| | — | — |
| | 16 | 16 |

| | | |
|--|-------|----|
| <i>Senior Year</i> | | |
| Observation of Teaching (Ed. 6f)..... | 1-2 | — |
| Supervised Teaching (Ed. 139f or s)..... | 2 | 2 |
| Principles of Secondary Education (Ed. 103 s)..... | — | 3 |
| Electives | 12-11 | 10 |
| | — | — |
| | 15 | 15 |

* Except students entering with four or more units of language.
† For students entering with less than three units of language.

Specific Requirements

Each student is expected to prepare for the teaching of at least two high school subjects in accordance with the certification requirements of the State Department of Education (By-law 30 revised). These are designated as major and minor subjects, with a requirement of from 30 to 36 semester hours of credit for a major and from 20 to 24 hours for a minor. If it is deemed advisable for a student to prepare for the teaching of three high school subjects, the requirement for a major may be modified at the discretion of the Dean to permit the pursuit of three subjects to the extent required for State certification. Semester hour requirements are detailed below.

No student who has not met all previous requirements will be permitted to do practice teaching.

English. For a major in English 36 semester hours are required as follows:

| | |
|--------------------------------|-------------------|
| Survey and Composition I..... | 6 semester hours |
| Survey and Composition II..... | 6 semester hours |
| Reading and Speaking..... | 2 semester hours |
| Literature | 16 semester hours |
| Electives | 6 semester hours |
| Total..... | 36 |

For a minor in English 26 semester hours are required:

| | |
|--------------------------------|-------------------|
| Survey and Composition I..... | 6 semester hours |
| Survey and Composition II..... | 6 semester hours |
| Reading and Speaking..... | 2 semester hours |
| Literature | 12 semester hours |
| Total | 26 |

Students with a major or minor in English must complete Survey and Composition I, Reading and Speaking, and Survey and Composition II by the end of the junior year.

Additional courses required in the major group are Shakespeare and 6 hours from the following: The Novel, English and American Essays, Modern Poets, Minor Victorian Poets, Tennyson, Browning, Prose and Poetry of the Romantic Age, Survey of American Literature, and Comparative Literature. (The electives for the minor in English must be from this group.)

History and Social Sciences. For a major in this group 30 semester hours are required, as follows:

| | |
|-----------------------------|-------------------|
| History | 18 semester hours |
| Economics or Sociology..... | 6 semester hours |
| Electives | 6 semester hours |

For a minor, the same requirements less the electives.

Students with a major or minor in History and Social Sciences must complete Modern European History and American History by the end of the junior year.

Modern Languages. French is the only modern language for which supervised teaching is available. For a major in Modern Languages 30 semester hours are required; for a minor 24 semester hours.

At least 18 hours of a major or minor in modern language must be completed by the end of the junior year.

A major or minor in French must include French 9y, French 10y, and at least one course of the 100 group.

A major or minor in Spanish must include Spanish 6y, and at least one course of the 100 group.

A major or minor in German must include German 6f and 7s or German 8f and 9s, and at least one course of the 100 group.

Mathematics. Twenty-eight semester hours are required for the major. The following sequence is recommended: Math. 11f, Math. 12f, Math. 18y, Math. 7s, and Math. 10s in the freshman year; Math. 19y, Math. 14s, and Math. 15s in the sophomore year; Math. 16y, Math. 17y (optional), in the junior year; Math. 111f, Math. 112s, Math. 123f, Math. 122s in the senior year.

For the minor the following course sequence is advised: Math. 11f, Math. 7s, Math. 10s in the freshman year; Math. 14s in the sophomore year; Math. 16y in the junior year; Math. 111f, Math. 122s in the senior year.

Students who pass an examination in solid geometry or trigonometry may be excused from Math. 7s or Math. 10s, respectively. For all majors and minors in mathematics, Ed. 128s and Ed. 135f are indicated.

Mathematics-Physics. This major consists of 18 hours in mathematics and 18 hours in physics. The normal sequence of courses is Math. 11f, Math. 7s, Math. 10s, Math. 14s, Math. 16y, Math. 111f, Math. 122s, and Phys. 1y, Phys. 103y.

Students who pass an examination in solid geometry or trigonometry may be excused from Math. 7s or Math. 10s, respectively.

Chemistry 1y is required as a supporting course to this major. Ed. 128s, Ed. 135f, and Ed. 137s should be taken.

If a minor in general science is offered in connection with this major, a total of 38 hours in the natural sciences should be presented.

Science. In general science, a major and a minor are offered consisting of 34 and 28 hours respectively, each including elementary courses in chemistry, physics, and biology (zoology and botany). Minors of twenty semester hours are offered in chemistry, physics, and biological science. A minor in biology must include the basic courses in botany and zoology.

A minor in chemistry must be supported by the elementary course in physics. Minors in physics and biology must be supported by the elementary course in chemistry, which should be completed before the beginning of the junior year. For students whose main interest is in biological science,

Ed. 126s and Ed. 136f are indicated, as are Ed. 126s and Ed. 137s for those who are interested chiefly in physics or chemistry.

If a major in general science is accompanied by a minor in chemistry, physics, or biology, the same credits may be counted towards both, provided that they number not less than 52 semester hours in natural science.

AGRICULTURAL EDUCATION

The objectives of the curricula in Agricultural Education are the teaching of secondary vocational agriculture, the work of county agents, and allied lines of the rural education service.

Curriculum A is designed for persons who have had no vocational agriculture in high school or less than two years of such instruction. Curriculum B is designed for persons who have had two or more years of thoroughgoing instruction in secondary agriculture of the type offered in Maryland high schools. Curriculum B relieves the student of the necessity of pursuing beginning agriculture courses in the first two years of his college course, permits him to carry general courses in lieu of those displaced by his vocational program in high school, and offers him an opportunity to lay a broad foundation for the advanced work in agriculture of the last two college years.

In addition to the regular entrance requirements of the University, involving graduation from a standard four-year high school, students electing the agricultural education curricula must present evidence of having acquired adequate farm experience after reaching the age of fourteen years.

Students with high averages upon petition may be relieved of certain requirements in these curricula, when evidence is presented showing that either through experience or through previous training the prescription is non-essential; or they may be allowed to carry an additional load.

Students electing these curricula may register in the College of Agriculture or in the College of Education. In either case they will register with the College of Education for the teacher's special diploma. Students will be certified for graduation only upon fulfillment of all the requirements of this curriculum.

Curriculum A.

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| General Animal Husbandry (A. H. 1f)..... | 3 | — |
| Principles of Vegetable Culture (Hort. 11 s)..... | — | 3 |
| General Chemistry (Chem. 1Ay or 1By)..... | 4 | 4 |
| General Botany (Bot. 1f)..... | 4 | — |
| General Zoology (Zool. 1 s)..... | — | 4 |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y) | 1 | 1 |
| | 15 | 15 |

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Sophomore Year</i> | | |
| Diseases of Plants (Plt. Path. 1f)..... | 3 | — |
| Introductory Entomology (Ent. 1 s)..... | — | 3 |
| Cereal Crop and Forage Crop Production (Agron. 1f and 2 s)..... | 3 | 3 |
| Geology (Geol. 1f)..... | 3 | — |
| Soils and Fertilizers (Soils 1 s)..... | — | 3 |
| Dairy Production (D. H. 101 y)..... | 3 | 3 |
| Elementary Pomology (Hort. 1f)..... | 3 | — |
| Fundamentals of Economics (Econ. 5 s)..... | — | 3 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y) | 2 | 2 |
| | 17 | 17 |
| <i>Junior Year</i> | | |
| Educational Psychology (Ed. Psych. 1f)..... | 3 | — |
| Farm Practicums and Demonstrations (R. Ed. 101f and 102 s)..... | 1 | 1 |
| Special Advanced Speaking (Speech 15f and 16 s)..... | 2 | 2 |
| Engineering Drafting (Dr. 1y)..... | 1 | — |
| Farm Machinery (F. Mech. 101f)..... | 3 | — |
| Gas Engines, Tractors, and Automobiles (F. Mech. 102 s)..... | — | 3 |
| Farm Poultry (Poultry 1 s)..... | — | 3 |
| Genetics (Gen. 101f)..... | 3 | — |
| Methods of Crop and Soil Investigations (Agron. 121 s)..... | — | 2 |
| Agricultural Economics (A. E. 2f)..... | 3 | — |
| Rural Life and Education (R. Ed. 104 s)..... | — | 3 |
| Electives | — | 3 |
| | 16 | 17 |

Senior Year

| | | |
|---|----|----|
| Observation and the Analysis of Teaching for Agricultural Students (R. Ed. 107f)..... | 3 | — |
| Project Organization and Cost Accounting (R. Ed. 105f)..... | 2 | — |
| Teaching Secondary Vocational Agriculture (R. Ed. 109f)..... | 3 | — |
| Departmental Organization and Administration (R. Ed. 112 s)..... | — | 2 |
| Practice Teaching (R. Ed. 120f or s)..... | — | 2 |
| Farm Shop Work (F. Mech. 104f)..... | 1 | — |
| Teaching Farm Shop in Secondary Schools (R. Ed. 114 s)..... | — | 1 |
| Principles of Secondary Education (Ed. 103 s)..... | — | 3 |
| Marketing of Farm Products (A. E. 102 s)..... | — | 3 |
| The Novel (Eng. 120f and 121 s) or Expository Writing (Eng. 5f and 6 s)..... | 2 | 2 |
| General Floriculture (Hort. 21f)..... | 2 | — |
| General Landscape Gardening (Hort. 31 s)..... | — | 2 |
| Farm Organization and Operation (A. E. 108f)..... | 3 | — |
| | 16 | 15 |

Curriculum B.

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| General Chemistry (Chem. 1Ay or 1By)..... | 4 | 4 |
| General Botany (Bot. 1f)..... | 4 | — |
| General Zoology (Zool. 1s)..... | — | 4 |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Elementary Physics (Phys. 3y)..... | 3 | 3 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y) | 1 | 1 |
| | — | — |
| | 15 | 15 |
| <i>Sophomore Year</i> | | |
| Diseases of Plants (Plt. Path. 1f)..... | 4 | — |
| General Entomology (Ent. 1s)..... | — | 3 |
| Elements of Organic Chemistry (Chem. 12Ay)..... | 2 | 2 |
| General Bacteriology (Bact. 1 A s)..... | — | 2 |
| Geology (Geol. 1f)..... | 3 | — |
| Soils and Fertilizers (Soils 1s)..... | — | 3 |
| Principles of Economics (Econ. 3y)..... | 3 | 3 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y) | 2 | 2 |
| Electives | 1 | — |
| | — | — |
| | 15 | 15 |
| <i>Junior Year</i> | | |
| Educational Psychology (Ed. Psych. 1f)..... | 3 | — |
| Farm Practicums and Demonstrations (R. Ed. 101f and 102 s)..... | 1 | 1 |
| Special Advanced Speaking (Speech 15f and 16 s)..... | 2 | 2 |
| Engineering Drafting (Dr. 1y)..... | 1 | — |
| Rural Life and Education (R. Ed. 104 s)..... | — | 3 |
| Electives | 10 | 11 |
| | — | — |
| | 17 | 17 |
| <i>Senior Year</i> | | |
| Observation and the Analysis of Teaching for Agricultural Students (R. Ed. 107f)..... | 3 | — |
| Project Organization and Cost Accounting (R. Ed. 105 f)..... | 2 | — |
| Departmental Organization and Administration (R. Ed. 112 s)..... | — | 2 |
| Teaching Secondary Vocational Agriculture (R. Ed. 109f)..... | 3 | — |
| Farm Shop Work (F. Mech. 104f)..... | 1 | — |
| Teaching Farm Shop in Secondary Schools (R. Ed. 114 s)..... | — | 1 |
| Practice Teaching (R. Ed. 120f or s)..... | — | 2 |
| Electives | 8 | 12 |
| | — | — |
| | 17 | 17 |

Electives to be as follows:

| | |
|---|---------|
| Advanced Animal Husbandry, Dairying, Poultry..... | 8 hours |
| Advanced Agricultural Economics, Farm Management..... | 6 hours |
| Advanced Agronomy | 6 hours |
| Advanced Horticulture | 6 hours |
| Advanced Farm Mechanics..... | 6 hours |
| English, History, Philosophy, Secondary Education, Genetics, Advanced Educational Psychology..... | 6 hours |
| Subjects of Special Interest..... | 4 hours |

HOME ECONOMICS EDUCATION

The Home Economics Education curriculum is for students who are preparing to teach vocational home economics or to engage in any phase of home economics work which requires a knowledge of teaching methods.

This is a general course including work in all phases of home economics and the allied sciences, with professional training for teaching these subjects. Electives may be chosen from other colleges.

A combination curriculum for Home Economics and Physical Education is offered. This satisfies the state certification requirements for both subjects.

Opportunity for additional training and practice is given through directed teaching, home management house, and special work and observation of children in the University Nursery School.

Students electing this curriculum may register in the College of Home Economics or in the College of Education. In either case they will register with the College of Education for the teacher's special diploma. Students will be certified for graduation only upon fulfillment of all the requirements of this curriculum.

Home Economics Education

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Textiles and Clothing (H. E. 11f)..... | 3 | — |
| Design (H. E. 21s)..... | — | 3 |
| General Chemistry (Chem. 1y)..... | 4 | 4 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| Physical Education (Phys. Ed. 2y and 4y)..... | 1 | 1 |
| Electives | 4 | 4 |
| | — | — |
| | 16 | 16 |

| | Semester | |
|---|----------|-----|
| | I | II |
| <i>Sophomore Year</i> | | |
| Introduction to Teaching (Ed. 2f and 3 s)..... | 2 | 2 |
| Foods (H. E. 31y)..... | 3 | 3 |
| Costume Design (H. E. 24f)..... | 3 | — |
| Textiles and Clothing (H. E. 12 s)..... | — | 3 |
| Elements of Organic Chemistry (Chem. 12Ay)..... | 2 | 2 |
| Elementary Physics (Phys. 3y)..... | 3 | 3 |
| Physical Education (Phys. Ed. 6y and 8y)..... | 2 | 2 |
| Electives | 1 | 1 |
| | — | — |
| | 16 | 16 |
| <i>Junior Year</i> | | |
| Educational Psychology (Ed. Psych. 1f)..... | 3 | — |
| Technic of Teaching (H. E. Ed. 5 s)..... | — | 2 |
| Observation of Teaching (H. E. Ed. 6 s)..... | — | 1-2 |
| Household Bacteriology (Bact. 3 s)..... | — | 3 |
| Nutrition (H. E. 131f and 132 s)..... | 3 | 3 |
| Management of the Home (H. E. 141f and 142 s)..... | 3 | 3 |
| Advanced Clothing (H. E. 111f)..... | 3 | — |
| Electives | 4 | 3-4 |
| | — | — |
| | 16 | 16 |
| <i>Senior Year</i> | | |
| Child Study (H. E. Ed. 102f)..... | 4 | — |
| Practice in Management of the Home (H. E. 143f)..... | 4 | — |
| Teaching Secondary Vocational Home Economics (H. E. Ed. 103f) | 4 | — |
| History of Architecture and Interior Decoration (H. E. 121y)..... | 3 | 3 |
| Problems in Teaching Home Economics (H. E. Ed. 106 s)..... | — | 1 |
| Principles of Secondary Education (Ed. 103 s)..... | — | 3 |
| Electives | 1 | 9 |
| | — | — |
| | 16 | 16 |

Electives should include one course in each of the following groups:
Botany, Zoology, Physiology, Genetics; Sociology; English Literature.

INDUSTRIAL EDUCATION

Three types of program are offered in Industrial Education: a four-year curriculum leading to the degree of Bachelor of Science in Industrial Education; a program of professional courses to prepare teachers to meet the certification requirements in vocational and pre-vocational or occupational schools; a program of courses for the improvement of teachers in service.

Four-Year Curriculum in Industrial Education

This curriculum is designed to prepare both trade and industrial teachers and teachers of industrial arts. There is sufficient latitude of electives so that a student may also meet certification requirements in some other high school subject.

The entrance requirements are the same as for other curricula offered in the University. Students entering this curriculum will be benefited by engaging in some trade or industry during the summer vacations.

One hundred twenty-eight semester credits are required for the degree of Bachelor of Science in Industrial Education.

Students entering an Industrial Education curriculum must register in the College of Education.

This curriculum, with slight variations according to the needs of the two groups, is so administered as to provide (A) a four-year curriculum in residence at College Park; (B) a four-year curriculum for teachers in service who have had some college work.

A. Curriculum for Students in Residence

The distribution of the curriculum requirements is approximately as follows:

| | |
|--|-------------------|
| Military Training or Physical Education..... | 6 semester hours |
| English, including Speech..... | 12 semester hours |
| History and the Social Sciences..... | 20 semester hours |
| Science and Mathematics..... | 20 semester hours |
| Shop Work and Drawing..... | 30 semester hours |
| Education | 22 semester hours |
| Electives | 18 semester hours |

| | Semester | |
|--|----------|-------|
| | I | II |
| <i>Freshman Year</i> | | |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y) | 1 | 1 |
| Engineering Drafting (Dr. 1y)..... | 2 | 2 |
| Forge Practice (Shop 1f)..... | 2 | — |
| Mathematics (Math. 11f and 14 s)..... | 3 | 3 |
| From the following groups: | | |
| History, Social Science, Science, Foreign Language, Physical Education | 3-5 | 5-7 |
| | — | — |
| | 15-17 | 15-17 |

| <i>Sophomore Year</i> | <i>Semester</i> | |
|---|-----------------|-----------|
| | <i>I</i> | <i>II</i> |
| Introduction to Teaching (Ed. 2f and 3 s)..... | 2 | 2 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y) | 2 | 2 |
| Machine Shop Practice (Shop 3f and 4 s)..... | 1 | 2 |
| Plane Surveying (Surv. 1f)..... | 1 | — |
| Foundry Practice (Shop 5 s)..... | — | 1 |
| From the following groups: | | |
| English, History, Social Science, Mathematics, Science, Foreign Language, Physical Education..... | 10-11 | 9-10 |
| | — | — |
| | 16-17 | 16-17 |

The curriculum in the junior and senior years follows closely the pattern of the Arts and Science Education curriculum. (See page 117.)

Attendance at one Summer Session is necessary in order to get certain Industrial Arts courses offered only in the Summer Session.

B. Curriculum for Teachers in Service

The distribution of curriculum requirements is the same as for Curriculum A, except that the military-physical training requirement is waived. In the mathematics and science group, and in the history and social science group, there is reasonable latitude for individual choice, but courses in mathematics as related to shopwork and courses in American history and government are required.

These curriculum requirements may be met by the in-service courses in Baltimore offered by the Department of Industrial Education and by Summer Session attendance.

Program for Vocational and Occupational Teachers

This curriculum is designed for students who have had experience in some trade or industry or in the teaching of shopwork.

Applicants for admission to this curriculum must have as a minimum requirement an elementary school education or its equivalent. The curriculum is prescribed, but it is administered flexibly in order that it may be adjusted to the needs of students.

To meet the needs for industrial teacher-training in Baltimore and in other industrial centers, extension courses are offered. The work of these courses deals with the analysis and classification of trade knowledge for instructional purposes, methods of teaching, observation and practice of teaching, organization and management of trade and industrial classes, psychology of trade and industrial education, and occupational information, guidance, and placement.

The completion of eight teacher-training courses, which require, in general, two years of two hundred fifty-six clock hours, entitles one to a full three-year vocational teacher's certificate in the State of Maryland, and to a special diploma from the College of Education of the University of Maryland.

Courses for Teachers in Service

Courses are offered for teachers in service who are seeking to satisfy requirements for promotion.

A special announcement of the in-service courses in Baltimore is issued in August of each year. This may be obtained from the office of the Registrar either in Baltimore or in College Park.

COMMERCIAL EDUCATION

The entrance requirements for the curriculum in Commercial Education are as follows: English 3 units; Algebra 1 unit; Science 1 unit; History 1 unit; Stenography 2 units; Typewriting 1 unit; Bookkeeping 1 unit; elective 5 units.

The Commercial Education curriculum includes a solid foundation of economics, social science and history, accounting and business administration subjects, adequate courses in methods of teaching commercial subjects, and supervised teaching.

The number of electives is large enough to enable a student to prepare for teaching some other subject in addition to the commercial subjects.

The curriculum does not include any college courses in shorthand and typewriting for the improvement of skill in these arts. Any student desiring to become a candidate for the bachelor's degree in commercial education must meet the speed and accuracy requirements in shorthand and typewriting and transcription necessary to become a teacher of commercial subjects either by work in commercial offices during the summer or by such other means as may be practicable for improving his skill and accuracy.

| | <i>Semester</i> | |
|---|-----------------|-----------|
| | <i>I</i> | <i>II</i> |
| <i>Freshman Year</i> | | |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Introduction to the Social Sciences (Soc. Sci. 1y)..... | 3 | 3 |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)..... | 1 | 1 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| Science (Biological or Physical)..... | 4 | 4 |
| One from the following groups: | | |
| History, Mathematics, Literature, Foreign Language..... | 3 | 3 |
| | 15 | 15 |
| <i>Sophomore Year</i> | | |
| American History (H. 2y)..... | 3 | 3 |
| Introduction to Teaching (Ed. 2f and 3 s)..... | 2 | 2 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)..... | 2 | 2 |
| Economic Geography and Industry (Econ. 1f)..... | 3 | — |
| Principles of Economics (Econ. 3y)..... | 3 | 3 |
| Survey and Composition II (Eng. 2f and 3s)..... | 3 | 3 |
| Electives | 2 | 5 |
| | 18 | 18 |

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Junior Year</i> | | |
| Principles of Accounting (Econ. 109y)..... | 3 | 3 |
| Business Organization and Operation (Econ. 7f)..... | 2 | — |
| Money and Credit (Econ. 101f)..... | 2 | — |
| Banking (Econ. 102 s)..... | — | 2 |
| Elements of Statistics (Gen. 114 s)..... | — | 3 |
| Educational Psychology (Ed. Psych. 1f)..... | 3 | — |
| Technic of Teaching (Ed. 5 s)..... | — | 2 |
| Electives | 6 | 6 |
| | 16 | 16 |

| | | |
|--|----|----|
| <i>Senior Year</i> | | |
| Business Law (Econ. 107y)..... | 3 | 3 |
| Commercial Subjects in the High School (Ed. 150f and 151s).... | 2 | 2 |
| Observation of Teaching (Ed. 6f)..... | 1 | — |
| Supervised Teaching of High School Subjects (Ed. 139 s)..... | — | 2 |
| Principles of Secondary Education (Ed. 103 s)..... | — | 3 |
| Electives | 10 | 4 |
| | 16 | 14 |

PHYSICAL EDUCATION

The Physical Education Curriculum is designed primarily to prepare teachers of physical education for the high schools. It includes 31 semester hours of physical education courses, exclusive of methods and supervised teaching. It is sufficiently specialized to meet that need. At the same time it is flexible enough so that certification requirements in other high school subjects may be met.

The curriculum includes separate courses for men and for women. Certain of these courses are open to both men and women. (See Sec. III, p. 233.)

A combination curriculum for Physical Education (women) and Home Economics satisfies the State certification requirements for both subjects. *Plans for such combination should be made at the beginning of the sophomore year.* The variations in the curriculum for men and for women are shown in the curriculum outlined below.

Upon satisfactory completion of the curriculum the degree of Bachelor of Science will be conferred.

Students electing this curriculum must register in the College of Education.

General Requirements

The general requirements are the same as for Arts and Science Education (see p. 116), except that a foreign language is not required, and 14 semester hours of biological science are required as specified in the schedule.

| | Semester | |
|--|----------|-------|
| | I | II |
| <i>Freshman Year</i> | | |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| General Zoology (Zool. 1f)..... | 4 | — |
| General Bacteriology (Bact. 1 s)..... | — | 4 |
| Introduction to the Social Sciences (Soc. Sci. 1y)..... | 3 | 3 |
| From the following groups: | | |
| History, Science, Foreign Language, Mathematics, Home | | |
| Economics | 3-4 | 3-4 |
| (Women) | | |
| Personal Hygiene and Physical Activities (Phys. Ed. 2y and 4y) | 1 | 1 |
| Fundamentals of Rhythm and Dance (Phys. Ed. 10y)..... | 1 | 1 |
| Music Appreciation (Mus. 1y)..... | 1 | 1 |
| (Men) | | |
| Basic R. O. T. C. (M. I. 1y)..... | 1 | 1 |
| Physical Activities (Phys. Ed. 1y)..... | 1 | 1 |
| Personal and Community Hygiene (Phys. Ed. 11y)..... | 2 | 2 |
| | — | — |
| | 17-18 | 17-18 |

| | | |
|---|-----|-----|
| <i>Sophomore Year</i> | | |
| Introduction to Teaching (Ed. 2f and 3s)..... | 2 | 2 |
| Survey and Composition II (Eng. 2f and 3s) or | | |
| Expository Writing (Eng. 5f and 6s)..... | 3-2 | 3-2 |
| Human Physiology (Zool. 15f)..... | 3 | — |
| Pathogenic Bacteriology (Bact. 2As)..... | — | 2 |
| Electives | 3-4 | 4-5 |

| | | |
|--|---|---|
| (Women) | | |
| Personal Hygiene and Physical Activities (Phys. Ed. 6y and 8y) | 2 | 2 |
| Games (Phys. Ed. 12f)..... | 2 | — |
| Natural Gymnastics (Phys. Ed. 20 s)..... | — | 2 |
| Clogs and Athletic Dances (Phys. Ed. 28f)..... | 2 | — |
| Folk Dancing (Phys. Ed. 30 s) | — | 2 |

| | | |
|---|----|----|
| (Men) | | |
| Basic R. O. T. C. (M. I. 2y)..... | 2 | 2 |
| Physical Activities (Phys. Ed. 3y)..... | 2 | 2 |
| Survey of Physical Education (Phys. Ed. 21y)..... | 2 | 2 |
| | — | — |
| | 17 | 17 |

| | | |
|--|-----|-----|
| <i>Junior Year</i> | | |
| Educational Psychology (Ed. Psych. 1 f)..... | 3 | — |
| Technic of Teaching (Ed. 5 s)..... | — | 2 |
| First Aid (Phys. Ed. 16 s)..... | — | 1 |
| Electives | 6-7 | 7-8 |

| | | Semester | |
|---|-------|----------|----|
| | | I | II |
| (Women) | | | |
| Physical Education Activities for High School Girls (Phys. Ed. 140y) | 2 | 2 | |
| Athletics (Phys. Ed. 18 f and s) | 2 | 2 | |
| Natural Dancing (Phys. Ed. 32 f) | 2 | | |
| (Men) | | | |
| Physical Education Practice (Phys. Ed. 5 y) | 1 | 1 | |
| Technics of Teaching Physical Education (Phys. Ed. 23y) | 2 | 2 | |
| Coaching High School Athletics (Phys. Ed. 13y) | 2 | 2 | |
| | 15 | 15 | |
| Senior Year | | | |
| Principles of Secondary Education (Ed. 103 s) | — | 3 | |
| Physical Education in the High School (Ed. 141f or Ed. 142f) or Supervised Teaching (Ed. 139f or s) | 2 | 2 | |
| (Women) | | | |
| Coaching and Officiating; Athletics for Girls (Phys. Ed. 26 y) | 2 | 2 | |
| Electives | 10 | 7-8 | |
| (Men) | | | |
| Advanced Physical Education Practice (Phys. Ed. 7 y) | 1 | 1 | |
| Special Advanced Speaking (Speech 15f and 16 s) | 2 | 2 | |
| Management of Intramural Athletics (Phys. Ed. 15 y) | 2 | 2 | |
| Electives | 7 | 5 | |
| | 14-15 | 14-15 | |

COLLEGE OF ENGINEERING

S. S. STEINBERG, *Acting Dean.*

The primary purpose of the College of Engineering is to train young men to practice the profession of Engineering. It endeavors at the same time to equip them for their duties as citizens and for careers in public service and in industry.

The new economic conditions with which the engineering graduate will be faced when he goes into practice have emphasized the necessity for the adjustment of engineering curricula in their scope and objectives. It has become evident that greater emphasis than heretofore should be placed on the fundamentals of engineering, and that the engineer's training should include a knowledge of the sciences which deal with human relations and a familiarity with business organization and administration.

Accordingly, our engineering curricula have been revised to increase the time devoted to fundamentals and to non-technical subjects, which are a necessary part of the equipment of every educated man, and which are now considered essential to the proper training of engineers because of the practical application of these subjects in professional and business life. It is well recognized that an engineering training affords an efficient preparation for many callings in public and private life outside the engineering profession.

The College of Engineering includes the Departments of Civil, Electrical, and Mechanical Engineering. In order to give the student time to choose the branch of engineering for which he is best adapted, the freshman year of the several courses is the same. Lectures and conferences will be used to guide the student to make a proper selection. The courses differ only slightly in the sophomore year, but in the junior and senior years the students are directed more definitely along professional lines.

Admission Requirements

The requirements for admission to the College of Engineering are, in general, the same as elsewhere described for admission to the undergraduate departments of the University, except as to the requirements in mathematics. See Section I, Entrance.

It is possible, however, for high school graduates having the requisite number of entrance units to enter the College of Engineering without the unit of advanced algebra, or the one-half unit of solid geometry, provided such students are prepared to devote their first summer to a course in analytic geometry. The program for such students would be as follows: During the first semester, five hours a week would be devoted to making up advanced algebra and solid geometry; in the second semester, mathematics of the first semester would be taken, and the second semester mathematics

would be taken in the summer session. Thus, such students, if they passed the course, would be enabled to enter the sophomore year the next fall with their class without loss of time.

Bachelor Degrees in Engineering

Courses leading to the degree of Bachelor of Science are offered in civil, electrical, and mechanical engineering, respectively.

Master of Science in Engineering

The degree of Master of Science in Engineering is given to students registered in the Graduate School who hold bachelor degrees in engineering, which represent an amount of preparation and work similar to that required for bachelor degrees in the College of Engineering of the University of Maryland.

Candidates for the degree of Master of Science in Engineering are accepted in accordance with the procedure and requirements of the Graduate School, as will be found explained in the catalogue under the head of Graduate School.

Professional Degrees in Engineering

The degrees of Civil Engineer, Electrical Engineer, and Mechanical Engineer will be granted only to graduates of the University who have obtained a bachelor's degree in engineering. The applicant must satisfy the following conditions:

1. He shall have engaged successfully in acceptable engineering work not less than four years after graduation.
2. He must be considered eligible by a committee composed of the Dean of the College of Engineering and the heads of the Departments of Civil, Electrical, and Mechanical Engineering.
3. His registration for a degree must be approved at least twelve months prior to the date on which the degree is to be conferred. He shall present with his application a complete report of his engineering experience and an outline of his proposed thesis.
4. He shall present a satisfactory thesis on an approved subject.

Equipment

The Engineering buildings are provided with lecture-rooms, recitation-rooms, drafting-rooms, laboratories, and shops for various phases of engineering work.

Drafting-Rooms. The drafting-rooms are equipped for practical work. The engineering student must provide himself with an approved drawing outfit, material, and books, the cost of which during the freshman year amounts to \$16.00 to \$20.00.

Electrical Engineering Laboratory. The equipment includes many of the various types of direct current and alternating current generators and motors, rotary converter, distribution transformers, control apparatus, and the measuring instruments essential to practical electrical testing. For experimental work, electrical power is obtained from engine-driven units and a turbine generator; a storage battery is used for constant voltage-testing.

Instruments are available for measuring the candle power of lamps and for the determination of illumination intensities. The standardizing laboratory apparatus includes primary and secondary standards used in calibrating laboratory instruments.

The telephone laboratory is equipped with apparatus for experimental work on magneto and common battery systems. Radio apparatus is available for student use as well as for experimental purposes.

Mechanical Engineering Laboratory. The apparatus consists of plain slide valve engines, steam turbine set, fans, pumps, indicators, gauges, feed water heaters, tachometers, injectors, flow meters, apparatus for determination of the B. T. U. in coal, gas, and liquid fuels, pyrometers, draft gauges, planimeters, thermometers, and other necessary apparatus and equipment for a mechanical laboratory.

Materials Laboratory. Apparatus and equipment are provided for making standard tests on various construction materials, such as steel, concrete, timber, and brick.

Equipment includes two 100,000-pound universal testing machines, cement-testing apparatus, extensometer and micrometer gauges, and other special devices for ascertaining the elastic properties of different materials.

Special apparatus which has been designed and made in the shops of the University is also made available for student work.

The College of Engineering owns a Beggs deformeter apparatus for the mechanical solution of stresses in structures by use of celluloid models.

Research Laboratory. Certain problems in highway research have been undertaken in coöperation with the State Roads Commission of Maryland and the U. S. Bureau of Public Roads. These studies have included traffic surveys over the Maryland State highway system, studies of cores cut from the State roads by means of a special core drilling apparatus, and laboratory studies of the elastic properties of concrete.

It is planned to continue and extend this type of coöperative research with other departments of the State and the federal government as well as with the industries of Maryland.

Machine Shops and Foundry. The machine shops and foundry are well lighted and fully equipped. Shops for wood working, metal, forge, and foundry practice are provided.

The wood-working shop has full equipment of hand and power machinery.

The machine shops are equipped with various types of lathes, planers, milling machines, and drill presses.

The foundry is provided with an iron cupola, a brass furnace, and a coke oven.

The shop equipment not only furnishes practice, drill, and instruction for students, but makes possible the complete production of special apparatus for conducting experimental and research work in engineering.

Surveying Equipment. Surveying equipment for plane topographic, and geodetic surveying is provided properly to equip several field parties. A wide variety of instruments is provided, including domestic as well as foreign makes.

Special Models and Specimens. A number of models illustrating various types of highway construction and highway bridges are available.

A wide variety of specimens of the more common minerals and rocks has been collected from various sections of the country, particularly from Maryland.

Library

In addition to the general University Library, each department maintains a library for reference, and receives the standard engineering magazines.

The class work, particularly in the higher courses, requires that the students consult special books of reference and current technical literature.

Curricula

The normal curriculum of each department is outlined on the following pages. Students are expected to attend and take part in the meetings of the student chapters of the technical engineering societies, and the courses of special lectures provided for the different classes. The freshman engineering students are required to attend a series of non-technical lectures, the speakers, for the most part, being other than engineers. The student is required to submit a brief written summary of each lecture.

Junior and senior students with requisite standing may elect with the permission of the Dean of the College of Engineering, additional courses not exceeding three credits a semester.

All engineering students are urged to secure work during the summer, particularly in engineering fields.

The proximity of the University to Baltimore and Washington, and to other places where there are large industrial enterprises, offers an excellent opportunity for the engineering student to observe what is being done in his chosen field. An instructor accompanies students on all inspection trips, and the student is required to submit a written report of each trip.

Freshman Year

As revised to take effect in 1936-1937.

Alike for all engineering courses.

| | Semester | |
|---|----------|----|
| | I | II |
| Survey and Composition I (Eng. 1y)..... | 3 | 3 |
| *Introduction to the Social Sciences (Soc. Sci. 1y)..... | 3 | 3 |
| Reading and Speaking (Speech 1y)..... | 1 | 1 |
| College Algebra (Math. 11f)..... | 3 | — |
| Laboratory in Algebra (Math. 12f)..... | 1 | — |
| Analytic Geometry (Math. 14s)..... | — | 3 |
| Laboratory in Geometry (Math. 15s)..... | — | 1 |
| General Chemistry (Chem. 1y)..... | 4 | 4 |
| Engineering Drawing (Dr. 1f)..... | 2 | — |
| Descriptive Geometry (Dr. 2s)..... | — | 2 |
| Forge Practice (Shop 1s)..... | — | 1 |
| Introduction to Engineering (Engr. 1f)..... | 1 | — |
| Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y) | 1 | 1 |
| Non-technical Lectures | — | — |
| | 19 | 19 |

CIVIL ENGINEERING

Civil Engineering deals with the design, construction, and maintenance of highways, railroads, waterways, bridges, buildings, water supply and sewerage systems, harbor improvements, dams, and surveying and mapping.

Sophomore Year

1936-1937 (Transition Year)

| | | |
|---|----|----|
| *General European History (H. 1y)..... | 3 | 3 |
| Oral Technical English (Speech 4y)..... | 1 | 1 |
| Calculus (Math. 16y)..... | 3 | 3 |
| Laboratory in Calculus (Math. 17y)..... | 1 | 1 |
| General Physics (Phys. 2y)..... | 5 | 5 |
| Descriptive Geometry (Dr. 4f)..... | 3 | — |
| Statics and Dynamics (Mech. 1s)..... | — | 3 |
| Plane Surveying (Surv. 3y)..... | 2 | 2 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y) | 2 | 2 |
| Engineering Lectures | — | — |
| | 20 | 20 |

*With permission, the student may substitute a course in History or Modern Language of equal credit.

Sophomore Year

As revised to take effect in 1937-1938.

| | Semester | |
|---|----------|----|
| | I | II |
| *General European History (H. 1y)..... | 3 | 3 |
| Oral Technical English (Speech 4y)..... | 1 | 1 |
| Calculus (Math. 16y)..... | 3 | 3 |
| Laboratory in Calculus (Math. 17y)..... | 1 | 1 |
| General Physics (Phys. 2y)..... | 5 | 5 |
| Descriptive Geometry (Dr. 3f)..... | 2 | — |
| Statics and Dynamics (Mech. 1s)..... | — | 3 |
| Plane Surveying (Surv. 2y)..... | 3 | 2 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y) | 2 | 2 |
| Engineering Lectures | — | — |
| | 20 | 20 |

Junior Year

1936-1937 (Transition Year).

| | | |
|--|----|----|
| Advanced Oral Technical English (Speech 5y)..... | 1 | 1 |
| Principles of Economics (Econ. 3y)..... | 3 | 3 |
| Engineering Report Writing (Eng. 128s)..... | — | 1 |
| Engineering Economy (Engr. 101f)..... | 1 | — |
| Engineering Geology (Engr. 102f)..... | 2 | — |
| Engineering Mechanics (Mech. 105y)..... | 5 | 4 |
| Materials of Engineering (Mech. 102s)..... | — | 2 |
| Elements of Prime Movers (Engr. 103s)..... | — | 2 |
| Railroad Curves and Earthwork (C. E. 103f)..... | 3 | — |
| Theory of Structures (C. E. 104s)..... | — | 5 |
| Advanced Surveying (Surv. 101f)..... | 3 | — |
| Technical Society | — | — |
| | 18 | 18 |

*With permission, the student may substitute a course in English or Modern Language of equal credit.

Junior Year

As revised to take effect in 1937-1938.

| | Semester | |
|--|----------|----|
| | I | II |
| Advanced Oral Technical English (Speech 5y)..... | 1 | 1 |
| Principles of Economics (Econ. 3y)..... | 3 | 3 |
| Engineering Report Writing (Eng. 128s)..... | — | 1 |
| Engineering Economy (Engr. 101f)..... | 1 | — |
| Engineering Geology (Engr. 102f)..... | 2 | — |
| Strength of Materials (Mech. 101f)..... | 5 | — |
| Hydraulics (C. E. 101s)..... | — | 4 |
| Materials of Engineering (Mech. 102s)..... | — | 2 |
| Elements of Prime Movers (Engr. 103s)..... | — | 2 |
| Railroad Curves and Earthwork (C. E. 103f)..... | 3 | — |
| Theory of Structures (C. E. 104s)..... | — | 5 |
| Advanced Surveying (Surv. 101f)..... | 3 | — |
| Technical Society | — | — |
| | 18 | 18 |

Senior Year

As revised to take effect in 1936-1937.

| | | |
|--|----|----|
| Advanced Oral Technical English (Speech 6y)..... | 1 | 1 |
| Business Organization and Operation (Econ. 7f)..... | 2 | — |
| Engineering Law and Specifications (Engr. 104s)..... | — | 2 |
| Engineering Chemistry (Chem. 111s)..... | — | 2 |
| Sanitary Bacteriology (Bact. 4s)..... | — | 1 |
| Elements of Highways (C. E. 105f)..... | 3 | — |
| Concrete Design (C. E. 106y)..... | 4 | 3 |
| Structural Design (C. E. 107y)..... | 4 | 3 |
| Municipal Sanitation (C. E. 108y)..... | 3 | 3 |
| Thesis (C. E. 109y)..... | 1 | 3 |
| Technical Society | — | — |
| | 18 | 18 |

ELECTRICAL ENGINEERING

Electrical Engineering deals with the generation, transmission, and distribution of electrical energy; electrical transportation, communication, illumination, and manufacturing; and miscellaneous electrical applications in industry, commerce, and home life.

Sophomore Year

As revised to take effect in 1936-1937:

| | Semester | |
|---|----------|----|
| | I | II |
| *General European History (H. 1y)..... | 3 | 3 |
| Oral Technical English (Speech 4y)..... | 1 | 1 |
| Calculus (Math. 16y)..... | 3 | 3 |
| Laboratory in Calculus (Math. 17y)..... | 1 | 1 |
| General Physics (Phys. 2y)..... | 5 | 5 |
| Descriptive Geometry (Dr. 5f)..... | 2 | — |
| Elements of Plane Surveying (Surv. 1f)..... | 1 | — |
| Machine Shop Practice (Shop 2f)..... | 1 | — |
| Elements of Electrical Engineering (E. E. 1y)..... | 1 | 2 |
| Statics and Dynamics (Mech. 1s)..... | — | 3 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y) | 2 | 2 |
| Engineering Lectures | — | — |
| | 20 | 20 |

Junior Year

1936-1937 (Transition Year)

| | | |
|--|----|----|
| Advanced Oral Technical English (Speech 5y)..... | 1 | 1 |
| Fundamentals of Economics (Econ. 5s)..... | — | 3 |
| Engineering Economy (Engr. 101f)..... | 1 | — |
| Differential Equations for Engineers (Math. 114f)..... | 3 | — |
| Engineering Mechanics (Mech. 104y)..... | 4 | 3 |
| Materials of Engineering (Mech. 102s)..... | — | 2 |
| Direct Currents (E. E. 102f)..... | 6 | — |
| Direct Current Design (E. E. 103s)..... | — | 1 |
| Electrical Measurements (E. E. 104f)..... | 3 | — |
| Alternating Current Circuits (E. E. 105s)..... | — | 5 |
| Thermodynamics (M. E. 103s)..... | — | 3 |
| Technical Society | — | — |
| | 18 | 18 |

*With permission, the student may substitute a course in English or Modern Language of equal credit.

Junior Year

As revised to take effect in 1937-1938.

| | Semester | |
|--|----------|----|
| | I | II |
| Advanced Oral Technical English (Speech 5y)..... | 1 | 1 |
| Fundamentals of Economics (Econ. 5s)..... | — | 3 |
| Engineering Economy (Engr. 101f)..... | 1 | — |
| Differential Equations for Engineers (Math. 114f)..... | 3 | — |
| Strength of Materials (Mech. 103f)..... | 4 | — |
| Hydraulics (C. E. 102s)..... | — | 3 |
| Materials of Engineering (Mech. 102s)..... | — | 2 |
| Direct Currents (E. E. 102f)..... | 6 | — |
| Direct Current Design (E. E. 103s)..... | — | 1 |
| Electrical Measurements (E. E. 104f)..... | 3 | — |
| Alternating Current Circuits (E. E. 105s)..... | — | 5 |
| Thermodynamics (M. E. 103s)..... | — | 3 |
| Technical Society | — | — |
| | 18 | 18 |

Senior Year

As revised to take effect in 1936-1937.

| | | |
|---|----|----|
| Advanced Oral Technical English (Speech 6y)..... | 1 | 1 |
| Business Organization and Operation (Econ. 7f)..... | 2 | — |
| Engineering Law and Specifications (Engr. 104s)..... | — | 2 |
| Alternating Current Machinery (E. E. 106y)..... | 4 | 4 |
| Alternating Current Design (E. E. 107f)..... | 1 | — |
| Electric Railways and Electric Power Transmission (E. E. 108y)..... | 3 | 3 |
| Electrical Communications (E. E. 109y)..... | 3 | 3 |
| Illumination (E. E. 110y)..... | 3 | 3 |
| Thesis (E. E. 111y)..... | 1 | 2 |
| Technical Society | — | — |
| | 18 | 18 |

MECHANICAL ENGINEERING

Mechanical Engineering deals with the design, construction, and maintenance of machinery and power plants; refrigeration, heating, and ventilation; and the organization and operation of industrial plants.

Sophomore Year

As revised to take effect in 1936-1937.

| | Semester | |
|---|----------|----|
| | I | II |
| *General European History (H. 1y)..... | 3 | 3 |
| Oral Technical English (Speech 4y)..... | 1 | 1 |
| Calculus (Math. 16y)..... | 3 | 3 |
| Laboratory in Calculus (Math. 17y)..... | 1 | 1 |
| General Physics (Phys. 2y)..... | 5 | 5 |
| Descriptive Geometry (Dr. 5f)..... | 2 | — |
| Elements of Plane Surveying (Surv. 1f)..... | 1 | — |
| Machine Shop Practice (Shop 3f)..... | 2 | — |
| Statics and Dynamics (Mech. 1s)..... | — | 3 |
| Kinematics of Machinery (M. E. 1s)..... | — | 2 |
| Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y) | 2 | 2 |
| Engineering Lectures | — | — |
| | 20 | 20 |

Junior Year

1936-1937 (Transition Year)

| | | |
|--|----|----|
| Advanced Oral Technical English (Speech 5y)..... | 1 | 1 |
| Fundamentals of Economics (Econ. 5s)..... | — | 3 |
| Engineering Economy (Engr. 101f)..... | 1 | — |
| Differential Equations for Engineers (Math. 114f)..... | 3 | — |
| Elements of Chemical Engineering (Chem. 120f)..... | 3 | — |
| Engineering Chemistry (Chem. 111s)..... | — | 3 |
| Engineering Mechanics (Mech. 104y)..... | 4 | 3 |
| Materials of Engineering (Mech. 102s)..... | — | 2 |
| Kinematics and Machine Design (M. E. 101Ay)..... | 3 | 3 |
| Thermodynamics (M. E. 104Ay)..... | 3 | 2 |
| Foundry Practice (Shop 102s)..... | — | 1 |
| Technical Society | — | — |
| | 18 | 18 |

*With permission, the student may substitute a course in English or Modern Language of equal credit

Junior Year

As revised to take effect in 1937-1938.

| | Semester | |
|--|----------|----|
| | I | II |
| Advanced Oral Technical English (Speech 5y)..... | 1 | 1 |
| Fundamentals of Economics (Econ. 5s)..... | — | 3 |
| Engineering Economy (Engr. 101f)..... | 1 | — |
| Differential Equations for Engineers (Math. 114f)..... | 3 | — |
| Elements of Chemical Engineering (Chem. 120f)..... | 3 | — |
| Engineering Chemistry (Chem. 111s)..... | — | 3 |
| Strength of Materials (Mech. 103f)..... | 4 | — |
| Hydraulics (C. E. 102s)..... | — | 3 |
| Materials of Engineering (Mech. 102s)..... | — | 2 |
| Kinematics of Machinery (M. E. 101f)..... | 3 | — |
| Machine Design (M. E. 102f)..... | 2 | — |
| Machine Shop Practice (Shop 101f)..... | 1 | — |
| Foundry Practice (Shop 102s)..... | — | 1 |
| Thermodynamics (M. E. 104s)..... | — | 5 |
| Technical Society | — | — |
| | 18 | 18 |

Senior Year

As revised to take effect in 1936-1937.

| | | |
|--|----|----|
| Advanced Oral Technical English (Speech 6y)..... | 1 | 1 |
| Business Organization and Operation (Econ. 7f)..... | 2 | — |
| Engineering Law and Specifications (Engr. 104s)..... | — | 2 |
| Internal Combustion Engines (M. E. 105f)..... | 3 | — |
| Heating and Ventilation (M. E. 106f)..... | 3 | — |
| Refrigeration (M. E. 107s)..... | — | 3 |
| Design of Prime Movers (M. E. 108y)..... | 3 | 3 |
| Design of Power Plants (M. E. 109s)..... | — | 2 |
| Principles of Electrical Engineering (E.E.101y)..... | 4 | 4 |
| Mechanical Laboratory (M. E. 110y)..... | 1 | 1 |
| Thesis (M. E. 111y)..... | 1 | 2 |
| Technical Society | — | — |
| | 18 | 18 |

COLLEGE OF HOME ECONOMICS

M. MARIE MOUNT, *Dean*

Home economics subjects are planned to meet the needs of the following classes of students: (1) those who desire a general knowledge of home economics without specializing in any one phase; (2) those who wish to teach home economics or to become extension specialists in home economics; (3) those who are interested in certain phases of home economics with the intention of becoming dietitians, restaurant and cafeteria managers, textile specialists, designers, buyers of clothing in department stores, or demonstrators for commercial firms.

Departments

For administrative purposes the College of Home Economics is organized into the Departments of Foods and Nutrition; Textiles, Clothing, and Art; and Home and Institution Management.

Facilities

The Home Economics Building is equipped with class rooms and laboratories. In addition the college maintains a home management house, in which students gain practical experience in home-making during their senior year.

Baltimore and Washington afford unusual opportunities for trips, additional study, and practical experience pertaining to the various phases of home economics.

Degree

The degree of Bachelor of Science is conferred for the satisfactory completion of four years of prescribed courses, of 128 semester hours. In accordance with the University policy, not less than three-fourths of the credits for graduation must be earned with grades of A, B, or C.

Prescribed Curricula

All students registered in the College of Home Economics follow the General Home Economics Curriculum for the first two years. At the beginning of the junior year a student may continue with the General Home Economics Curriculum, or elect one of the following special curricula, or a combination of curricula. A student who wishes to teach home economics may register in Home Economics Education in the College of Home Economics, or in the College of Education (see Home Economics Education).

Following are the outlines of the Curricula for General Home Economics, Textiles and Clothing, Foods and Nutrition, Institution Management, and Home Economics Extension.

GENERAL HOME ECONOMICS

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| Survey and Composition I (Eng. 1 y)..... | 3 | 3 |
| General Chemistry (Chem. 1 y)..... | 4 | 4 |
| Textiles and Clothing (H. E. 11 f)..... | 3 | — |
| Design (H. E. 21 s)..... | — | 3 |
| Reading and Speaking (Speech 1 y)..... | 1 | 1 |
| Physical Education (Phys. Ed. 2 y and 4 y)..... | 1 | 1 |
| *Language or Electives..... | 3 | 3 |
| Home Economics Lectures..... | — | — |
| | 15 | 15 |
| <i>Sophomore Year</i> | | |
| Costume Design (H. E. 24 f)..... | 3 | — |
| Textiles and Clothing (H. E. 12 s)..... | — | 3 |
| Elements of Organic Chemistry (Chem. 12 Ay and Chem. 12 B f or s)..... | 3 | 3 |
| Foods (H. E. 31 y)..... | 3 | 3 |
| Elementary Physics (Phys. 3 y)..... | 3 | 3 |
| Physical Education (Phys. Ed. 6 y and 8 y)..... | 2 | 2 |
| **Electives | 8 | 2 |
| | 17 | 16 |
| <i>Junior Year</i> | | |
| Nutrition (H. E. 131 f and 132 s)..... | 3 | 3 |
| Management of the Home (H. E. 141 f and 142 s)..... | 3 | 3 |
| Advanced Clothing (H. E. 111 f)..... | 3 | — |
| Household Bacteriology (Bact. 3 s)..... | — | 3 |
| Electives | 8 | 8 |
| | 17 | 17 |
| <i>Senior Year</i> | | |
| Child Study (H. E. Ed. 102 f)..... | 4 | — |
| Practice in Management of the Home (H. E. 143 f)..... | 4 | — |
| Choice of one unit in Foods, Clothing, or Textiles, or an additional unit in Child Study..... | 4 | — |
| History of Architecture and Interior Decoration (H. E. 121 y)..... | 3 | 3 |
| **Electives | — | 12 |
| | 15 | 15 |

* The language requirement may be waived for students entering with three or more years of a language.

** In addition to the curriculum as prescribed, one course in each of the groups indicated below, is required:

economics; psychology; sociology; and one of the following sciences:
zoology, botany, physiology, or genetics.

INSTITUTION MANAGEMENT CURRICULUM

| | Semester | |
|---|----------|----|
| | I | II |
| <i>Junior Year</i> | | |
| General Physiological Chemistry (Chem. 108 f)..... | 4 | — |
| Household Bacteriology (Bact. 3 s)..... | — | 3 |
| *Nutrition (H. E. 131 f and 132 s)..... | 3 | 3 |
| Management of the Home (H. E. 141 f and 142 s)..... | 3 | 3 |
| Institution Management (H. E. 144 y)..... | 3 | 3 |
| Technic of Teaching (H. E. Ed. 5 s)..... | — | 2 |
| Observation of Teaching (H. E. Ed. 6 s)..... | — | 1 |
| Electives | 4 | 2 |
| | — | — |
| | 17 | 17 |

| | | |
|--|----|----|
| <i>Senior Year</i> | | |
| Practice in Management of the Home (H. E. 143 f)..... | 4 | — |
| Child Study (H. E. Ed. 102 f)..... | 4 | — |
| Practice in Institution Management (H. E. 145 f)..... | 4 | — |
| or | | |
| Problems and Practice in Foods (H. E. 135 f)..... | | |
| Advanced Institution Management (H. E. 146 s)..... | — | 3 |
| History of Architecture and Interior Decoration (H. E. 121 y)..... | 3 | 3 |
| Mental Hygiene (Ed. Psych. 105 s)..... | — | 3 |
| Electives | — | 6 |
| | — | — |
| | 15 | 15 |

HOME ECONOMICS EXTENSION CURRICULUM

| | | |
|---|----|----|
| <i>Junior Year</i> | | |
| Nutrition (H. E. 131 f and 132 s)..... | 3 | 3 |
| Management of the Home (H. E. 141 f and 142 s)..... | 3 | 3 |
| Advanced Clothing (H. E. 111 f)..... | 3 | — |
| Household Bacteriology (Bact. 3 s)..... | — | 3 |
| Educational Psychology (Ed. Psych. 1 f)..... | 3 | — |
| Technic of Teaching (H. E. Ed. 5 s)..... | — | 2 |
| Observation of Teaching (H. E. Ed. 6 s)..... | — | 1 |
| Demonstrations (H. E. 133 f)..... | 2 | — |
| Electives | 3 | 5 |
| | — | — |
| | 17 | 17 |

* In addition to Nutrition (H. E. 131 f and 132 s), Child Nutrition (H. E. 136 s) or Seminar in Nutrition (H. E. 201 f or s) is recommended.

| | Semester | |
|--|----------|----|
| | I | II |
| <i>Senior Year</i> | | |
| Child Study (H. E. Ed. 102 f)..... | 4 | — |
| Practice in Management of the Home (H. E. 143 f)..... | 4 | — |
| Problems and Practice in Foods (H. E. 135 f)..... | 4 | — |
| History of Architecture and Interior Decoration (H. E. 121 y)..... | 3 | 3 |
| Mental Hygiene (Ed. Psych. 105 s)..... | — | 3 |
| Human Physiology (Zool. 15 f)..... | — | 3 |
| Methods in Home Economics Extension (H. E. 151 s)..... | — | 3 |
| Applied Art (H. E. 122 s)..... | — | 1 |
| Electives | — | 2 |
| | — | — |
| | 15 | 15 |

Fundamentals of Economics and Principles of Sociology are required in the sophomore year in the Home Economics Extension Course. One course in each of the following is recommended: Government, Community Recreation, and First Aid.

*TEXTILES AND CLOTHING CURRICULUM

| | | |
|---|----|----|
| <i>Junior Year</i> | | |
| Household Bacteriology (Bact. 3 s)..... | — | 3 |
| Nutrition (H. E. 131 f)..... | 3 | — |
| Advanced Clothing (H. E. 111 f)..... | 3 | — |
| Chemistry of Textiles (Chem. 14 s)..... | — | 3 |
| Management of the Home (H. E. 141 f and 142 s)..... | 3 | 3 |
| Advanced Textiles (H. E. 114 f)..... | 3 | — |
| Electives | 5 | 8 |
| | — | — |
| | 17 | 17 |

| | | |
|--|----|----|
| <i>Senior Year</i> | | |
| Practice in Management of the Home (H. E. 143 f)..... | 4 | — |
| Child Study (H. E. Ed. 102 f)..... | 4 | — |
| Problems and Practice in Textiles, Clothing, or Related Art (H. E. 113 f)..... | 4 | — |
| History of Architecture and Interior Decoration (H. E. 121 y)..... | 3 | 3 |
| Advanced Design (H. E. 123 s)..... | — | 3 |
| Special Clothing Problems (H. E. 112 s)..... | — | 3 |
| Electives | — | 6 |
| | — | — |
| | 15 | 15 |

* Upon the advice of the instructor in charge, the Textiles and Clothing curriculum may be modified for the election of art courses.

FOODS CURRICULUM

| | Semester | |
|--|----------|----|
| | I | II |
| <i>Junior Year</i> | | |
| General Physiological Chemistry (Chem. 108 f)..... | 4 | — |
| Nutrition (H. E. 131 f and 132 s)..... | 3 | 3 |
| Management of the Home (H. E. 141 f and 142 s)..... | 3 | 3 |
| Demonstrations (H. E. 133 f)..... | 2 | — |
| Household Bacteriology (Bact. 3 s)..... | — | 3 |
| Electives | 5 | 8 |
| | — | — |
| | 17 | 17 |
| <i>Senior Year</i> | | |
| Child Study (H. E. Ed. 102 f)..... | 4 | — |
| Practice in Management of the Home (H. E. 143 f)..... | 4 | — |
| Problems and Practice in Foods (H. E. 135 f)..... | 4 | — |
| History of Architecture and Interior Decoration (H. E. 121 y)..... | 3 | 3 |
| Advanced Foods (H. E. 134 s)..... | — | 3 |
| Electives | — | 9 |
| | — | — |
| | 15 | 15 |

THE GRADUATE SCHOOL

C. O. APPLEMAN, *Dean*.

The Graduate School Council

H. C. BYRD, LL.D., President of the University.
 C. O. APPLEMAN, Ph.D., Dean of the Graduate School, Chairman.
 A. N. JOHNSON, D.Eng., Professor of Highway Engineering.
 M. MARIE MOUNT, M.A., Professor of Home and Institution Management.
 H. J. PATTERSON, D.Sc., Director of the Agricultural Experiment Station.
 W. S. SMALL, Ph.D., Professor of Education.
 T. H. TALIAFERRO, C.E., Ph.D., Professor of Mathematics.
 E. C. AUCHTER, Ph.D., Professor of Horticulture.
 L. B. BROUGHTON, Ph.D., Professor of Chemistry.
 E. N. CORY, Ph.D., Professor of Entomology.
 H. F. COTTERMAN, Ph.D., Professor of Agricultural Education.
 WM. H. FALLS, Ph.D., Professor of French.
 H. C. HOUSE, Ph.D., Professor of English Language and Literature.
 DEVOE MEADE, Ph.D., Professor of Animal and Dairy Husbandry.
 G. L. JENKINS, Ph.D., Professor of Pharmaceutical Chemistry (Baltimore).
 EDUARD UHLENHUTH, Ph.D., Professor of Gross Anatomy (Baltimore).

General Information

HISTORY AND ORGANIZATION

In the earlier years of the institution the Master's degree was frequently conferred, but the work of the graduate students was in charge of the departments concerned, under the supervision of the General Faculty. The Graduate School was established in 1918, and organized graduate instruction leading to both the Master's and the Doctor's degree was undertaken. The faculty of the Graduate School includes all members of the various faculties who give instruction in approved graduate courses. The general administrative functions of the Graduate Faculty are delegated to a Graduate Council, of which the Dean of the Graduate School is chairman.

LIBRARIES

In addition to the resources of the University library, the great libraries of the National Capital are easily available for reference work. Because of the proximity of these libraries to College Park they are a valuable asset to research and graduate work at the University of Maryland.

The library building at College Park contains a number of seminar rooms and other desirable facilities for graduate work.

THE GRADUATE CLUB

The graduate students maintain an active Graduate Club. Several meetings for professional and social purposes are held during the year. Students working in different departments have an opportunity to become acquainted with one another and thus profit by the cultural values derived from association with persons working in different fields.

GENERAL REGULATIONS

ADMISSION

Graduates from a recognized college regarded as standard by the institution and by regional or general accrediting agencies are admitted to the Graduate School. The applicant shall present an official transcript of his college record, which for unconditional admission shall show creditable completion of an undergraduate major in the subject chosen for specialization in the Graduate School. Any deficiencies may be made up in courses without credit toward a graduate degree. Special students who do not expect to become candidates for degrees are permitted to take such courses as in the opinion of the departments concerned they are prepared to pursue with profit.

Application blanks for admission to the Graduate School are obtained from the office of the Dean. After approval of the application, a matriculation card, signed by the Dean, is issued to the student. This card permits one to register in the Graduate School. After payment of the fee, the matriculation card is stamped and returned. It is the student's certificate of membership in the Graduate School, and may be called for at any succeeding registration.

Admission to the Graduate School does not necessarily imply admission to candidacy for an advanced degree.

REGISTRATION

All students pursuing graduate work in the University, even though they are not candidates for higher degrees, are required to register at the beginning of each semester in the office of the Dean of the Graduate School, Room T-214, Agriculture Building. Students taking graduate work in the Summer Session are also required to register in the Graduate School at the beginning of each session. In no case will graduate credit be given unless the student matriculates and registers in the Graduate School. The program of work for the semester or the summer session is arranged with the major department and entered upon two course cards, which are signed first by the professor in charge of the student's major subject and then by the Dean of the Graduate School. One card is retained in the Dean's office. The student takes the other card, and, in case of a new student, also the matriculation card, to the Registrar's office, where a charge slip for fees is issued. The charge slip, together with the course card, is presented at the Cashier's office for adjustment of fees. After certification by the Cashier that fees

have been paid, class cards are issued by the Registrar. Students will not be admitted to graduate courses without class cards. Course cards may be obtained at the Registrar's office or at the Dean's office. The heads of departments usually keep a supply of these cards in their respective offices.

GRADUATE COURSES

Graduate students must elect for credit in partial fulfillment of the requirements for higher degrees only courses designated *For Graduates*, or *For Graduates and Advanced Undergraduates*. Graduate students may elect courses numbered from 1 to 99 in the general catalogue, but graduate credit will not be allowed for these. Students with inadequate preparation may be obliged to take some of these courses as prerequisites for advanced courses. No credit toward graduate degrees may be obtained by correspondence or extension study.

PROGRAM OF WORK

The professor who is selected to direct a student's thesis work is the student's adviser in the formulation of a graduate program including suitable minor work, which is arranged in coöperation with the instructors. To encourage thoroughness in scholarship through application, graduate students in the regular sessions are limited to a program of thirty credit hours for the year.

SUMMER GRADUATE WORK

Graduate work in the Summer Session may be counted as residence toward an advanced degree. By carrying approximately six semester hours of graduate work for four summer sessions, and upon submitting a satisfactory thesis, a student may be granted the degree of Master of Arts or Master of Science. In some instances a fifth summer may be required, in order that a satisfactory thesis may be completed.

Upon recommendation by the head of the student's major department, and with the approval of the Graduate Council, a maximum of six semester hours of graduate work done at other institutions of sufficiently high standing may be substituted for required work here; such substitution does not shorten the required residence period.

By special arrangement, graduate work may be pursued in some departments during the entire summer. Such students as graduate assistants, or others who may wish to supplement work done during the regular year, may satisfy one-third of an academic year's residence by full-time graduate work for eleven or twelve weeks, provided satisfactory supervision and facilities for summer work are available in their special fields.

The University publishes a special bulletin, giving full information concerning the Summer Session and the graduate courses offered therein. The bulletin is available upon application to the Registrar of the University.

GRADUATE WORK IN PROFESSIONAL SCHOOLS AT BALTIMORE

Graduate courses and opportunities for research are offered in some of the professional schools at Baltimore. Students pursuing graduate work in the professional schools must register in the Graduate School, and meet the same requirements and proceed in the same way as do graduate students in other departments of the University.

GRADUATE WORK BY SENIORS IN THIS UNIVERSITY

Seniors who have completed all their undergraduate courses in this University by the end of the first semester, and who continue their residence in the University for the remainder of the year, are permitted to register in the Graduate School and secure the privileges of its membership, even though the bachelor's degree is not conferred until the close of the year.

A senior of this University who has nearly completed the requirements for the undergraduate degree may, with the approval of his undergraduate dean and the Dean of the Graduate School, register in the undergraduate college for graduate courses, credits for which may be transferred toward an advanced degree at this University; but the total of undergraduate and graduate courses must not exceed fifteen credits for the semester.

ADMISSION TO CANDIDACY FOR ADVANCED DEGREES

Application for admission to candidacy for either the Master's or the Doctor's degree is made on application blanks, which are obtained at the office of the Dean of the Graduate School. These are filled out in duplicate, and, after the required endorsements are obtained, the applications are acted upon by the Graduate Council. An official transcript of the candidate's undergraduate record and of any graduate courses completed at other institutions must be filed in the Dean's office before the application can be considered.

Admission to candidacy in no case assures the student of a degree, but merely signifies that he has met all the formal requirements and is considered by his instructors sufficiently prepared and able to pursue such graduate study and research as are demanded by the requirements of the degree sought. The candidate must show superior scholarship by the type of graduate work already completed.

Application for admission to candidacy is made at the time stated in the sections dealing with the requirements for the degree sought.

REQUIREMENTS FOR THE DEGREES OF MASTER OF ARTS AND MASTER OF SCIENCE

Advancement to Candidacy. Each candidate for the Master's degree is required to make application for admission to candidacy not later than the date when instruction begins for the second semester of the academic year in which the degree is sought, but not until at least twelve semester course

hours of graduate work have been completed with an average grade of B or above.

Residence Requirements. Two semesters or four summer sessions may satisfy the residence requirements for the degree of Master of Arts or Master of Science. Inadequate preparation for the graduate courses the student wishes to pursue may make a longer period necessary.

Course Requirements. A minimum of twenty-four semester hours in courses approved for graduate credit is required for the Master's degree. If the student is inadequately prepared for the required graduate courses, in either the major or the minor subjects, additional courses may be required to supplement the undergraduate work. Not less than twelve semester hours and not more than fifteen semester hours in graduate courses must be earned in the major subject. The remaining credits of the total of twenty-four hours required must be outside the major subject, and they must comprise a group of coherent courses intended to supplement and support the major work. Not less than one-half of the total required course credits for the Master's degree must be selected from courses numbered 200 or above. The entire course of study must constitute a unified program approved by the student's major adviser and by the Dean of the Graduate School. No credits that are reported with a grade lower than C are acceptable for an advanced degree.

At least eighteen of the twenty-four semester course credits required for the Master's degree must be taken at this institution. In certain cases graduate work done in other graduate schools of sufficiently high standing may be substituted for the remaining required credits, but any such substitution of credits does not shorten the normal required residence at the University of Maryland. The Graduate Council, upon recommendation of the head of the major department, passes upon all graduate work done at other institutions. The final examination will cover all graduate work offered in fulfillment of the requirements for the degree.

Thesis. In addition to the twenty-four semester hours in graduate courses a satisfactory thesis is required of all candidates for the Master's degree. It must demonstrate the student's ability to do independent work, and it must be acceptable in literary style and composition. It is assumed that the time devoted to thesis work will be not less than the equivalent of six semester hours earned in graduate courses. If the Master's thesis is based upon independent research, the student may register in research courses in the amount prescribed by his department, but not more than four semester hours in these may be included in the twenty-four semester hours required in graduate courses for the Master's degree. With the approval of the student's major professor and the Dean of the Graduate School, the thesis in certain cases may be prepared *in absentia* under direction and supervision of a member of the faculty of this institution.

The thesis should be typewritten, double spaced, on a good quality of paper 11 x 8½ inches in size. The original copy must be deposited in the

office of the Graduate School not later than two weeks before commencement. It should be held together with removable clamp, and placed in a manila or other durable folder, with the title and the name of the writer on the outside. The thesis should not be stapled, as it is later bound by the University and placed in the University library. One or two additional carbon copies should be provided for use of members of the examining committee prior to the final examination. If the thesis contains extensive charts or graphs, it is not necessary to duplicate them in the carbon copies, as the official copy will be accessible to the examining committee.

Final Examination. The final oral examination is conducted by a committee appointed by the Dean of the Graduate School. The student's adviser acts as chairman of the committee. The other members are persons under whom the student has taken most of his major and minor courses. The chairman and the candidate are notified of the personnel of the examining committee at least one week prior to the period set for oral examinations. The chairman of the committee selects the exact time and place for the examination and notifies the other members of the committee and the candidate. The examination should be conducted within the dates specified, and a report of the committee sent to the Dean as soon as possible after the examination. A special form for this purpose is supplied to the chairman of the committee. Such a report is the basis upon which recommendation is made to the faculty that the candidate be granted the degree sought. The period for the oral examination is usually one hour.

The examining committee also approves the thesis, and it is the candidate's obligation to see that each member of the committee has ample opportunity to examine a copy of the thesis prior to the date of the examination.

A student will not be admitted to final examination until all other requirements for the degree have been met.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

Advancement to Candidacy. Candidates for the Doctor's degree must be admitted to candidacy not later than one academic year prior to the granting of the degree. Applications for admission to candidacy for the Doctor's degree must be deposited in the office of the Dean not later than the first Wednesday in October of the academic year in which the degree is sought.

The applicant must have obtained from the head of the Department of Modern Languages a statement that he possesses a reading knowledge of French and German. Preliminary examinations or such other substantial tests as the departments may elect are also required for admission to candidacy.

Residence. Three years of full-time resident graduate study are required. The first two of the three years may be spent in other institutions offering standard graduate work. On a part-time basis the time needed will be correspondingly increased. The degree is not given merely as a certificate of residence and work, but is granted only upon sufficient evidence of high

attainments in scholarship and ability to carry on independent research in the special field in which the major work is done.

Major and Minor Subjects. The candidate must select a major and one or two closely related minor subjects. Thirty semester hours of minor work are required. The remainder of the required residence is devoted to intensive study and research in the major field. The amount of required course work in the major subject will vary with the department and the individual candidate.

Thesis. The ability to do independent research must be shown by a dissertation on some topic connected with the major subject. The original typewritten copy of the thesis must be deposited in the office of the Dean at least three weeks before commencement. One or two extra copies should be provided for use of members of the examining committee prior to the date of the final examination. The thesis is later printed in such form as the committee and the Dean may approve, and fifty copies are deposited in the University library.

Final Examination. The final oral examination is held before a committee appointed by the Dean. One member of this committee is a representative of the Graduate Faculty who is not directly concerned with the student's graduate work. One or more members of the committee may be persons from other institutions who are distinguished scholars in the student's major field.

The duration of the examination is approximately three hours, and covers the research of the candidate as embodied in his thesis, and his attainments in the fields of his major and minor subjects. The other detailed procedures are the same as those stated for the Master's examination.

RULES GOVERNING LANGUAGE EXAMINATIONS FOR CANDIDATES FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

1. A candidate for the Doctor's degree must show in a written examination that he possesses a reading knowledge of French and German. The passages to be translated will be taken from books and articles in his specialized field. It is not required that the candidate recognize every word of the text, but it is presumed that he will know sufficient grammar to distinguish inflectional forms, and that he will have a large enough vocabulary to give a good translation without the aid of a dictionary.

2. Application for admission to these tests must be filed in the office of the Dean of the Graduate School at least ten days in advance of the tests, and should be accompanied by some 500 pages of text from which the applicant wishes to have his examination chosen.

3. No penalty is attached to failure in the examination, and the unsuccessful candidate is free to try again at the next date set for these tests.

4. Examinations are held in the Seminar room, Library building, on the first Wednesdays in February, June, and October, at 2 p. m.

GRADUATE FEES

The fees paid by graduate students are as follows:

A matriculation fee of \$10.00. This is paid once only, upon admission to the Graduate School.

A fixed charge, each semester, at the rate of \$4.00 per semester credit hour.

A diploma fee (Master's degree), \$10.00.

A graduation fee, including hood (Doctor's degree), \$20.00.

FELLOWSHIPS AND ASSISTANTSHIPS

Fellowships. A number of fellowships have been established by the University. A few industrial fellowships are also available in certain departments. The stipend for University fellows is \$400 for the academic year and the remission of all graduate fees except the diploma fee.

Application blanks for University fellowships may be obtained from the office of the Graduate School. The application, with the necessary credentials, is sent by the applicant directly to the Dean of the Graduate School.

Fellows are required to render minor services prescribed by their respective major departments. The usual amount of service required does not exceed twelve clock hours per week. Fellows are permitted to carry a full graduate program, and they may satisfy the residence requirement for higher degrees in the normal time.

The selection of fellows is made by the departments to which the fellowships are assigned, with the approval of the dean or director concerned, but all applications must first be approved by the Dean of the Graduate School. The awards of University fellowships are on a competitive basis.

Teaching and Research Assistantships. A number of teaching and research assistantships are available in several departments. The stipend for assistantships varies with the services rendered, and the amount of graduate work which an assistant is permitted to carry is determined by the head of the department, with the approval of the dean or director concerned.

The compensation for each of a number of assistantships is \$800 a year. The assistant in this class devotes one-half of his time to instruction or research in connection with Experiment Station projects, and he is required to spend two years in residence for the Master's degree. If he continues in residence for the Doctor's degree, he is allowed two-thirds residence credit for each academic year at this University. The minimum residence requirement from the Bachelor's degree, therefore, may be satisfied in four academic years and one summer, or three academic years and three summer sessions of eleven or twelve weeks each.

No minimum residence requirement for a higher degree has been established for other assistants. The Graduate Council, guided by the recommendation of the student's advisory committee, prescribes the required

residence in each individual case at the time the student is admitted to candidacy.

All graduate fees except the diploma fee are remitted to all assistants, provided they are in full graduate status and are carrying programs leading directly to an academic higher degree.

Further information regarding assistantships may be obtained from the departments or colleges concerned.

COMMENCEMENT

Attendance is required at the commencement at which the degree is conferred, unless the candidate is excused by the Dean and the President of the University.

SUMMER SESSION

WILLARD S. SMALL, *Director*

A Summer Session of six weeks is conducted at College Park. The program serves the needs of the following classes of students: (1) teachers and supervisors of the several classes of school work—elementary, secondary, vocational, and special; (2) regular students who are candidates for degrees; (3) graduate students; (4) special students not candidates for degrees.

Terms of Admission

The admission requirements for those who desire to become candidates for degrees are the same as for any other session of the University. Before registering, a candidate for a degree will be required to consult the Dean of the College or School in which he wishes to secure the degree. Teachers and special students not seeking a degree are admitted to the courses of the summer session for which they are qualified. All such selection of courses must be approved by the Director of the Summer Session.

Credits and Certificates

The semester hour is the unit of credit as in other sessions of the University. In the summer session, a course meeting five times a week for six weeks and requiring the standard amount of outside work has a value of two semester hours.

Courses satisfactorily completed will be credited by the State Department of Education towards satisfying certification requirements of all classes.

Summer Graduate Work

For persons wishing to do graduate work towards an advanced degree in the summer sessions, special arrangements are made supplementing the regular procedure. Teachers and other graduate students working for a degree on the summer plan must meet the same requirements as to admission, credits, scholarship, and examinations as do students enrolled in the other sessions of the University.

For detailed information in regard to the Summer Session, consult the special Summer Session announcement, issued annually in April.

DEPARTMENT OF MILITARY SCIENCE AND TACTICS

JOSEPH D. PATCH, *Lieut. Col. Infantry, U. S. Army, Professor*

RESERVE OFFICERS' TRAINING CORPS

The work in this department is based upon the provisions of Army Regulations No. 145-10, War Department.

Authorization

An infantry unit of the Senior Division of the Reserve Officers' Training Corps was established at the University under the provisions of the Act of Congress of June 3, 1916, as amended.

Organization

The unit is organized as a regiment of three battalions of three rifle companies each, and a band. All units are commanded by Advanced Course students, who have been selected for these commands on a basis of merit. The course of instruction is divided into two parts: the Basic Course and the Advanced Course.

Objectives

*Basic Course

The object of this course is to afford to students enjoying the privileges of State and Federal aided education an opportunity to be trained for positions involving leadership, within either the State or the nation. To this end the methods employed are designed to fit men mentally, physically, and morally for pursuits of peace or, if necessity requires, for national defense. A member of the R.O.T.C. is not in the Army of the United States, and membership in the unit carries no legal obligation to serve in the Army, or any of the armed forces.

**Advanced Course

The primary object of the Advanced Course is to provide military instruction and systematic training through the agency of civil educational institutions to selected students, to the end that they may qualify as reserve officers in the military forces of the United States. It is intended to attain this objective during the time the students are pursuing their general or professional studies, thus causing minimum interference to the preparatory requirements of their projected civil careers.

A student prior to enrollment in this course must have satisfactorily completed the basic course and must have indicated in writing his desire to

* Required of qualified students.
** Elective for qualified students.

undertake the course. The applicant further must obtain on this document the recommendation of both the Dean of his College and the Professor of Military Science and Tactics, and submit same to the President of the Institution for approval. No student will be enrolled in the Advanced Course without the approval of the President of the University.

Time Allotted

For first and second years, basic course, three periods a week of not less than one hour each are devoted to this work, of which at least one hour is utilized for theoretical instruction.

For third and fourth years, advanced course, elective, five periods a week of not less than one hour each are devoted to this work, of which at least three periods are utilized for theoretical instruction.

Physical Training

Physical training forms an important part of military instruction, and it is the policy of the Military Department to encourage and support the physical training given by civilian teachers, thus coöperating in an effort to promote a vigorous manhood.

Physical Examination

All members of the Reserve Officers' Training Corps are required to be examined physically at least once after entering the University.

Uniforms

Members of the Reserve Officers' Training Corps must appear in proper uniform at all military formations and at such other times as the Professor of Military Science and Tactics may designate with the approval of the President of the University.

Uniforms, or commutation in lieu of uniforms, for the Reserve Officers' Training Corps, are furnished by the Government. The uniforms are the regulation uniforms of the United States Army, with certain distinguishing features; or, if commutation of uniforms is furnished, then such uniforms as may be adopted by the University. Such uniforms must be kept in good condition by the students. They remain the property of the Government; and, though intended primarily for use in connection with military instruction, may be worn at other times unless the regulations governing their use are violated. The uniform will not be worn in part nor used while the wearer is engaged in athletic sports other than those required as a part of the course of instruction. A Basic Course uniform which is furnished to a student by the Government will be returned to the Military Department at the end of the year; or before, if a student severs his connection with the Department. In case commutation of uniforms is furnished, the uniform so purchased becomes the property of the student upon completion of two years' work.

Commutation

Students who elect the Advanced Course and who have signed the contract with the Federal Government to continue in the Reserve Officers' Training Corps for the two remaining years of the Course are entitled to a small per diem money allowance, for commutation of subsistence, payable quarterly from and including the date of contact, until they complete the course at the institution.

Summer Camps

An important and excellent feature of the Reserve Officers' Training Corps is the summer camp. In specially selected parts of the country, camps are held for a period not exceeding six weeks for students who are members of the Advanced Course Reserve Officers' Training Corps. These camps are under the close and constant supervision of army officers, and are intended primarily to give a thorough and comprehensive practical course of instruction in the different arms of the service.

Parents may feel assured that their sons are carefully watched and safeguarded. Wholesome surroundings and associates, work and healthy recreation are the keynote to contentment. Social life is not neglected, and the morale branch exercises strict censorship over all social functions.

The attendance at summer camps is compulsory only for students who are taking the advanced course, which, as has been previously stated, is elective.

Students who attend the summer camps are under no expense. The Government furnishes transportation from the institution to the camp and from the camp to the institution, or to the student's home, unless the mileage is greater than that from the camp to the institution. In this case, the amount of mileage from the camp to the institution is allowed the student. Clothing, quarters, and food are furnished. The Advanced Course students, in addition to receiving quarters and food, are paid sixty cents for each day spent in camp. To obtain credit for camp a student must be in attendance at camp at least 85 per cent of the prescribed camp period.

Commissions

(a) Each year, upon completion of the Advanced Course, students qualified for commissions in the Reserve Officers' Corps will be selected by the head of the institution and the professor of Military Science and Tactics.

(b) The number to be selected from each institution and for each arm of the service will be determined by the War Department.

(c) The University of Maryland has received a rating from the War Department of "Generally Excellent" for the past several years. This rating indicates that the work of its R. O. T. C. unit has been recognized by the Federal Government as being of a superior order. The "Generally Excellent" rating supersedes the former designation of "Distinguished College," which designation has been discontinued by the War Department for institutions such as this University.

Credits

Military instruction at this University is on a par with other university work, and the requirements of this department as to proficiency the same as those of other departments.

Students who have received military training at any educational institution under the direction of an army officer detailed as professor of military science and tactics may receive such credit as the professor of military science and tactics and the President may jointly determine.

PHYSICAL EDUCATION, RECREATION, AND ATHLETICS

The purpose of the program of physical education at the University is broadly conceived as the development of the individual student. To accomplish this purpose, physical examinations and classification tests are given the incoming students to determine the relative physical fitness of each. Upon the basis of the needs disclosed by these tests, and individual preferences, students are assigned to the various activities of the program.

Freshmen and sophomores assigned to physical education take three activity classes each week throughout the year. In the fall, soccer, touch football, and tennis are the chief activities; in the winter, basketball, volley ball, and other team games; and in the spring, track, baseball, and tennis. In addition to these team activities, sophomore students may elect a considerable number of individual sports, such as fencing, boxing, wrestling, horse-shoes, ping pong, bag punching, and the like.

An adequate program of intramural sports is conducted, also. Touch football and soccer in the fall, basketball and volleyball in the winter, baseball and track in the spring, are the chief activities in this program. Plaques, medals, and appropriate awards in all tournaments of the program are provided for the winning teams and individual members.

Every afternoon of the school session the facilities of the Physical Education Department are thrown open to all students for free unorganized recreation. Touch football, soccer, basketball, basket shooting, apparatus work, fencing, boxing, wrestling, bag punching, tennis, badminton, and ping pong are the most popular contests engaged in.

The University is particularly fortunate in its possession of excellent facilities for carrying on the activities of the program of physical education. A large modern gymnasium, a new field house, a number of athletic fields, tennis courts, baseball diamonds, running tracks, and the like, and an athletic plant provided solely for the program of physical education conducted for the girls, constitute the major part of the equipment.

In addition to the activities described above, the University sponsors a full program of intercollegiate athletics for men. Competition is promoted in varsity and freshman football, basketball, baseball, track, boxing, lacrosse, and tennis, which are all major sports of this program. The University is a member of the Southern Conference, the National Collegiate Athletic Association, and other national organizations for the promotion of amateur athletics.

The University also maintains curricula designed to train men and women students to teach physical education and coach in the high schools of the State.

For a description of the courses in Physical Education, see College of Education, and Section III, Description of Courses.

SCHOOL OF DENTISTRY

J. BEN ROBINSON, *Dean*.

Faculty Council

GEORGE M. ANDERSON, D.D.S., F.A.C.D.
ROBERT P. BAY, M.D., F.A.C.S.
BBICE M. DORSEY, D.D.S.
OREN H. GAVER, D.D.S., F.A.C.D.
BURT B. IDE, D.D.S., F.A.C.D.
HOWARD J. MALDEIS, M.D.
ROBERT L. MITCHELL, Phar.D., M.D.
ALEXANDER H. PATERSON, D.D.S., F.A.C.D.
J. BEN ROBINSON, D.D.S., F.A.C.D.
LEO A. WALZAK, D.D.S.

HISTORY

The University of Maryland was organized December 28, 1807, as the College of Medicine of Maryland. On December 29, 1812, the University of Maryland charter was issued to the College of Medicine of Maryland. There were at that period but four medical schools in America—the University of Pennsylvania, founded in 1765; the College of Physicians and Surgeons of New York, in 1767; Harvard University, in 1782; and Dartmouth College, in 1797.

The first lectures on dentistry in America were delivered by Dr. Horace H. Hayden in the University of Maryland, School of Medicine, between the years 1821 and 1825. These lectures were interrupted in 1825 by internal dissension in the School of Medicine, but were continued in the year 1837. It was Dr. Hayden's idea that dentistry merited greater attention than had been given it by medical instruction, and he undertook to develop this specialty as a branch of medicine. With this thought in mind he, with the support of Dr. Chapin A. Harris, appealed to the Faculty of Physic of the University of Maryland for the creation of a department of dentistry as a part of the medical curriculum. The request having been refused, an independent college was decided upon. A charter was applied for and granted by the Maryland Legislature February 1, 1840. The first faculty meeting was held February 3, 1840, at which time Dr. H. H. Hayden was elected President and Dr. C. A. Harris, Dean. The introductory lecture was delivered by Dr. Harris on November 3, 1840, to the five students matriculated in the first class. Thus was the Baltimore College of Dental Surgery, the first and oldest dental school in the world, created as the foundation of the present dental profession.

In 1873, the Maryland Dental College, an offspring of the Baltimore College of Dental Surgery, was organized and continued instruction in dental

subjects until 1879, at which time it was consolidated with the Baltimore College of Dental Surgery. A department of dentistry was organized at the University of Maryland in the year 1882, graduating a class each year from 1883 to 1923. This school was chartered as a corporation and continued as a privately owned and directed institution until 1920, when it became a State institution. The Dental Department of the Baltimore Medical College was established in 1895, continuing until 1913, when it merged with the Dental Department of the University of Maryland.

The final combining of the dental educational interests of Baltimore was effected June 15, 1923, by the amalgamation of the student bodies of the Baltimore College of Dental Surgery and the University of Maryland, School of Dentistry, the Baltimore College of Dental Surgery becoming a distinct department of the State University under State supervision and control. Thus we find in the Baltimore College of Dental Surgery, Dental School, University of Maryland, a merging of the various efforts at dental education in Maryland. From these component elements have radiated developments of the art and science of dentistry until the strength of its alumni is second to none either in number or degree of service to the profession.

BUILDING

The School of Dentistry now occupies its new building at the northwest corner of Lombard and Greene Streets, adjoining the University Hospital, being so situated that it offers opportunity for abundant clinic material. The new building provides approximately 45,000 square feet of floor space, is fire proof, and is ideally lighted and ventilated. A sufficient number of large lecture rooms and classrooms, a library and reading room, science laboratories, technic laboratories, clinic rooms, locker rooms, etc., are provided. The building is furnished with new equipment throughout with every accommodation necessary for satisfactory instruction under comfortable arrangements and pleasant surroundings. The large clinic wing accommodates one hundred and thirty-nine chairs. The following clinic departments have been provided: Operative, Prosthetic (including Crown and Bridge and Ceramics), Anesthesia and Surgery, Pathology, Orthodontia, Pedodontia, Radiodontia, and Photography. Modern units with electric engines have been installed in all clinics, while provision has been made for the use of electric equipment in all technic laboratories.

COURSE OF INSTRUCTION

The Baltimore College of Dental Surgery, Dental School, University of Maryland offers a four-year course in dentistry devoted to instruction in the medical sciences, the dental sciences, the ancillary sciences, and clinical practice. Instruction consists of didactic lectures, laboratory instruction, demonstrations, conferences, and quizzes. Topics are assigned for collateral reading to train the student in the values and use of dental literature.

REQUIREMENTS FOR MATRICULATION

Care is observed in selecting students to begin the study of dentistry, through a strict adherence to proved ability in secondary education and in the completion of prescribed courses in predental collegiate training. The secondary school requirements observed by the College of Arts and Sciences, University of Maryland, are strictly adhered to.

REQUIREMENTS FOR ADMISSION TO THE COLLEGE OF ARTS AND SCIENCES

The requirement for admission is graduation from an accredited secondary school which requires for graduation in a four-year course of not less than fifteen units. *(See note.) The equivalent in entrance examinations may be offered by a non-graduate of a secondary school.

REQUIRED: English (I, II, III, IV), 3 units; algebra to quadratics, 1 unit; plane geometry, 1 unit; history, 1 unit; science, 1 unit. Total 7 units.

ELECTIVE: Agriculture, astronomy, biology, botany, chemistry, civics, drawing, economics, general science, geology, history, home economics, vocational subjects, languages, mathematics, physical geography, physics, zoology, or any other subject offered in a standard high or preparatory school for which graduation credit is granted toward college or university entrance. Eight units must be submitted from this group.

All applicants must present their credentials for verification to the Registrar of the University of Maryland. A blank form for submitting credentials may be had by applying to the office of the Dean. The form must be filled out in full with names of *all* schools attended, signed by the applicant and returned to the Registrar's office with two dollars investigation fee. The applicant should not send diplomas or certificates. The Registrar of the University of Maryland will secure all necessary credentials after the application has been received. One should not make application unless reasonably certain that preparation is sufficient, or unless intending to complete preparation if insufficient. Ample time should be allowed for securing credentials and investigating schools. If the applicant qualifies for the study of the profession, a certificate will be issued; otherwise, notice will be given concerning whatever deficiency exists.

The applicant for admission must present a certificate of recommendation from the principal of the high school from which he has graduated.

REQUIREMENTS FOR ADMISSION TO THE SCHOOL OF DENTISTRY

Dental education is advancing from a one-year predental collegiate requirement to a two-year predental collegiate requirement. The School of Dentistry, University of Maryland, will begin to make the two-year requirement with the regular session 1936-1937.

*Required seven (7), and Elective eight (8), units for entrance. Total fifteen (15) units.

Applicants for admission to the Dental School must present credit for at least sixty semester hours of college work including eight semester hours of inorganic chemistry, eight semester hours of zoology, six semester hours of English, six semester hours of college mathematics, six semester hours of organic chemistry, and six semester hours of physics.

COURSE OF INSTRUCTION—PREDENTAL

The University of Maryland offers the following predental course of instruction to students desiring to equip themselves for admission to the School of Dentistry under the two-four plan. Admission to this course is based upon the requirements for admission to the College of Arts and Sciences.

Suggested Predental Curriculum

| | Semester | |
|--|----------|----|
| | I | II |
| <i>Freshman Year</i> | | |
| Composition and Rhetoric (Eng. 1y)..... | 3 | 3 |
| Algebra (Math. 1f)..... | 3 | — |
| Plane Trigonometry (Math. 2s)..... | — | 3 |
| Reading and Speaking (Eng. 2y)..... | 1 | 1 |
| Inorganic Chemistry (Chem. 1y)..... | 4 | 4 |
| General Zoology (Zool. 1f)..... | 4 | — |
| Vertebrate Zoology (Zool. 2s)..... | — | 4 |
| Technical Drawing..... | 1 | 1 |
| | — | — |
| Total Semester Hours..... | 16 | 16 |
| <i>Sophomore Year</i> | | |
| Organic Chemistry (Chem. 2y)..... | 2 | 2 |
| Organic Chemistry Laboratory (Chem. 3y)..... | 2 | 2 |
| General Physics (Physics 1y)..... | 4 | 4 |
| Modern Language (French or German)..... | 4 | 4 |
| Fundamentals of Economics..... | 3 | — |
| Government, Psychology, or Sociology..... | — | 3 |
| Metallurgy..... | 1 | 1 |
| | — | — |
| Total Semester Hours..... | 16 | 16 |

For the information of high school graduates anticipating the two-year predental course, the fees for this are included in this catalogue on page 168. This course is offered in the Baltimore branch of the University.

Transfers

Applicants desiring to transfer from another recognized dental school must show record of creditable scholarship in all years previously devoted to

the study of dentistry. No applicant carrying conditions or failures in any year of his previous dental instruction will be considered. All records must show an average grade of 5% over the passing mark of the school in which the transfer credits were earned. Applicants whose records show habitual failures and conditions will not be considered for admission. The transferring student must satisfy the preliminary educational requirement outlined under Requirements for Matriculation.

Attendance Requirements

In order to receive credit for a full session, each student must have entered and be in attendance on the day the regular session opens, at which time lectures to all classes begin, and remain until the close of the session, the dates for which are announced in the Calendar.

Regular attendance is demanded. Students with less than eighty-five per cent attendance in any course will be denied the privilege of final examination in any and all such courses. In certain unavoidable circumstances of absence the Dean may honor excuses, but students with less than eighty-five per cent attendance will not be promoted to the next succeeding class.

In cases of serious illness, as attested by a physician, students may register not later than the twentieth day following the advertised opening of the regular session. Students may register and enter not later than ten days after the beginning of the session, but such delinquency will be charged as absence from the class.

Promotion

To be promoted to the next succeeding year a student must have passed courses amounting to at least 80 per cent of the total schedule hours of the year, and must have an average of 80 per cent on all subjects passed.

A grade of 75 per cent is passing. A grade between 60 per cent and passing is a condition. A grade below 60 per cent is a failure. A condition may be removed by a reëxamination. In such effort, failure to make a passing mark is recorded as a failure in the course. A failure can be removed only by repeating the course. A student with combined conditions and failures amounting to 40 per cent of the schedule hours of the year will not be permitted to proceed with his class. Students carrying conditions will not be admitted to senior standing; a student in any other class may carry one condition to the next succeeding year. All conditions and failures must be removed within twelve months from the time they were incurred.

Equipment

A complete list of necessary instruments and materials for technic and clinic courses, and text books for lecture courses will be announced for the various classes. Each student will be required to provide himself with whatever is necessary to meet the needs of his course, and present the same to a responsible class officer for inspection. No student will be permitted to go on with his class who does not meet this requirement.

Department

The profession of dentistry demands, and the School of Dentistry requires evidence of good moral character of its students. The conduct of the student in relation to his work and fellow students will indicate his fitness to be taken into the confidence of the community as a professional man. Integrity, sobriety, temperate habits, truthfulness, respect for authority and associates, and honesty in the transaction of business affairs as a student will be considered as evidence of good moral character necessary to the granting of a degree.

Requirements for Graduation

The degree of Doctor of Dental Surgery is conferred upon a candidate who has met the following conditions:

1. Documentary evidence that he has attained the age of 21 years.
2. Evidence that the candidate has taken the full four-year course of study of the dental curriculum, the last year of which shall have been spent in this institution.
3. A general average of 80 per cent or higher during the full course of study.
4. The satisfaction of all technic and clinic requirements of the various departments.
5. Liquidation of all indebtedness to the college and satisfactory adjustment of all financial obligations in the community prior to the beginning of final examinations.

FEES FOR THE DENTAL COURSE

| | |
|--|--------|
| Application fee (paid at time of filing formal application for admission) | \$2.00 |
| Matriculation fee (paid at time of enrollment)..... | 10.00 |
| Tuition for the session, resident student..... | 250.00 |
| Tuition for the session, non-resident student..... | 350.00 |
| Dissecting fee (first semester, freshman year)..... | 15.00 |
| Laboratory fee (each session)..... | 20.00 |
| Locker fee—freshman and sophomore years (first semester)..... | 3.00 |
| Locker fee—junior and senior years (first semester)..... | 5.00 |
| Laboratory breakage deposit—freshman and sophomore years (first semester) | 5.00 |
| Graduation fee (paid with second semester fees of senior year)..... | 15.00 |
| Penalty fee for late registration..... | 5.00 |
| Examinations taken out of class and reëxaminations..... | 5.00 |
| One certified transcript of record will be issued to each student free of charge. Each additional copy will be issued only on payment of | 1.00 |

FEES FOR THE PREDENTAL COURSE

| | |
|---|--------|
| Application fee (paid at time of filing application for admission)..... | \$2.00 |
| Matriculation fee (paid at the time of enrollment)..... | 10.00 |
| Tuition for the session, resident student..... | 200.00 |
| Tuition for the session, non-resident student..... | 250.00 |
| Laboratory fee (each session)..... | 20.00 |
| Locker fee (each session)..... | 3.00 |
| Laboratory breakage deposit (each session)..... | 5.00 |

The registration of a student in any school or college of the University shall be regarded as a registration in the University of Maryland, but when such student transfers to a Professional School of the University or from one Professional School to another, he must pay the usual matriculation fee required by each Professional School.

A student who neglects or fails to register prior to or within the day or days specified for his school, will be called upon to pay a fine of \$5.00. The last day of registration with fine added to regular fees is Saturday at noon of the week in which instruction begins, following the specified registration period. (This rule may be waived only on the written recommendation of the Dean.)

Each student is required to fill in a registration card for the office of the Registrar, and pay to the Comptroller one-half of the tuition fee in addition to all other fees noted as payable first semester before being admitted to class work at the opening of the session. The remainder of tuition and second semester fees must be in the hands of the Comptroller on the registration day for the second semester.

According to the policy of the Dental School no fees will be returned. In case the student discontinues his course, any fees paid will be credited to a subsequent course, but are not transferable.

The above requirements will be rigidly enforced.

Definition of Residence and Non-Residence

Students who are minors are considered to be resident students if, at the time of their registration their parents* have been residents of this State for at least one year.

Adult students are considered to be resident students if, at the time of their registration, they have been residents of this State for at least one year; provided such residence has not been acquired while attending any school or college in Maryland.

The status of the residence of a student is determined at the time of his first registration in the University, and may not thereafter be changed by him unless, in the case of a minor, his parents* move to and become legal residents of this State by maintaining such residence for at least one full

* The term "parents" includes persons who, by reason of death or other unusual circumstances, have been legally constituted the guardians of or stand in loco parentis to such minor students.

calendar year. However, the right of the student (minor) to change from a non-resident to a resident status must be established by him prior to registration for a semester in any academic year.

Summer Courses

Aside from and independent of the regular session, special courses are offered during the summer recess. The course in clinical instruction is conducted from June 1 to August 1 and from September 1 to 19 inclusive. The course is open only to students registered in the school. It offers opportunities to students carrying conditions in the clinic from the preceding session as well as those who desire to gain more extended practice during their training period. The clinics are under the direction of capable demonstrators, full credit being given for all work done.

The Gorgas Odontological Society

The Gorgas Odontological Society was organized in 1914 as an honorary student dental society with scholarship as a basis for admission. The society is named after Dr. Ferdinand J. S. Gorgas, a pioneer in dental education, a teacher of many years experience, and during his life a great contributor to dental literature. It was with the idea of perpetuating his name that the society adopted it.

Students become eligible for membership at the beginning of their junior year if, during their preceding years of the dental course, they have attained a general average of 85 per cent or more in all of their studies. Meetings are held once each month, and are addressed by prominent dental and medical men, an effort being made to obtain speakers not connected with the University. The members have an opportunity, even while students, to hear men associated with other educational institutions.

Omicron Kappa Upsilon

Phi Chapter of Omicron Kappa Upsilon honorary dental fraternity was chartered at the Baltimore College of Dental Surgery, Dental School, University of Maryland, during the session of 1928-1929. Membership in the fraternity is awarded to a number not exceeding twelve per cent of the graduating class. This honor is conferred upon students who through their professional course of study creditably fulfill all obligations as students, and whose conduct, earnestness, evidence of good character, and high scholarship recommend them to election.

Scholarship Loans

A number of scholarship loans from various organizations and educational foundations have been available to students in the School of Dentistry. These loans are offered on the basis of excellence in scholastic attainment and the need on the part of students for assistance in completing

their course in dentistry. It has been the policy of the Faculty to recommend only students in the last two years for such privileges.

The Henry Strong Educational Foundation—From this fund, established under the will of General Henry Strong, of Chicago, an annual allotment is made to the Baltimore College of Dental Surgery, Dental School, University of Maryland, for loans available for the use of young men and women students under the age of twenty-five. Recommendations for the privileges of these loans are limited to students in the junior and senior years. Only students who through stress of circumstances require financial aid and who have demonstrated excellence in educational progress are considered in making nominations to the secretary of this fund.

The Edward S. Gaylord Educational Endowment Fund—Under a provision of the will of the late Dr. Edward S. Gaylord, of New Haven, Conn., an amount approximating \$16,000 was left to the Baltimore College of Dental Surgery, Dental School, University of Maryland, the proceeds of which are to be devoted to aiding worthy young men in securing dental education.

Alumni Association

The first annual meeting of the Society of the Alumni of the Baltimore College of Dental Surgery was held in Baltimore, March 1, 1849. This organization has continued in existence to the present, its name having been changed to The National Alumni Association of the Baltimore College of Dental Surgery, Dental School, University of Maryland.

THE SCHOOL OF LAW

ROGER HOWELL, *Dean*

THE FACULTY COUNCIL

HON. HENRY D. HARLAN, A.M., LL.B., LL.D.
RANDOLPH BARTON, JR., ESQ., A.B., LL.B.
EDWIN T. DICKERSON, ESQ., A.M., LL.B.
CHARLES MCHENRY HOWARD, ESQ., A.B., LL.B.
HON. MORRIS A. SOPER, A.B., LL.B.
HON. W. CALVIN CHESNUT, A.B., LL.B.
G. RIDGELY SAPPINGTON, ESQ., LL.B.
ROGER HOWELL, ESQ., A.B., Ph.D., LL.B.
EDWIN G. W. RUGE, ESQ., A.B., LL.B.
A. J. CASNER, A.B., LL.B.
G. KENNETH REIBLICH, A.B., Ph.D., J.D.

While the first faculty of law of the University of Maryland was chosen in 1813, and published in 1817 "A Course of Legal Study Addressed to Students and the Profession Generally," which the North American Review pronounced to be "by far the most perfect system for the study of law which has ever been offered to the public," and which recommended a course of study so comprehensive as to require for its completion six or seven years, no regular school of instruction in law was opened until 1823. The institution thus established was suspended in 1836 for lack of proper pecuniary support. In 1869 the School of Law was reorganized, and in 1870 regular instruction therein was again begun. From time to time the course has been made more comprehensive, and the staff of instructors increased in number. Its graduates now number more than three thousand, and included among them are a large proportion of the leaders of the Bench and Bar of the State and many who have attained prominence in the profession elsewhere.

The Law School has been recognized by the Council of the Section of Legal Education of the American Bar Association as meeting the standards of the American Bar Association, and has been placed upon its approved list.

The Law School is a member of the Association of American Law Schools, an association composed of the leading law schools in the United States, member schools being required to maintain certain high standards relating to entrance requirements, faculty, library, and curriculum.

The Law School is also registered as an approved school on the New York Regents' list.

The Law School Building, erected in 1931, is located at Redwood and Greene Streets in Baltimore. In addition to classrooms and offices for

the Law faculty, it contains a large auditorium, practice-court room, students' lounge and locker rooms, and the law library, the latter containing a collection of carefully selected text-books, English and American reports, leading legal periodicals, digests, and standard encyclopedias. No fee is charged for the use of the library, which is open from 9.00 A. M. to 10.30 P. M., except on Saturday, when it closes at 5.00 P. M.

Course of Instruction

The School of Law is divided into two divisions, the Day School and the Evening School. The same curriculum is offered in each school, and the standards of work and graduation requirements are the same.

The Day School course covers a period of three years of thirty-two weeks each, exclusive of holidays. The class sessions are held during the day, chiefly in the morning hours. The Practice Court sessions are held on Monday evenings from 8.00 to 10.00 P. M.

The Evening School course covers a period of four years of thirty-six weeks each, exclusive of holidays. The class sessions are held on Monday, Wednesday, and Friday evenings of each week from 6.30 to 9.30 P. M. This plan leaves the alternate evenings for study and preparation by the student.

The course of instruction in the School of Law is designed thoroughly to equip the student for the practice of his profession when he attains the Bar. Instruction is offered in the various branches of the common law, of equity, of the statute law of Maryland, and of the public law of the United States. The course of study embraces both the theory and practice of the law, and aims to give the student a broad view of the origin, development, and function of law, together with a thorough practical knowledge of its principles and their application. Analytical study is made of the principles of substantive and procedural law, and a carefully directed practice court enables the student to get an intimate working knowledge of procedure.

Special attention is given to the statutes in force in Maryland, and to any peculiarities of the law in that State, where there are such. All of the subjects upon which the applicant for the Bar in Maryland is examined are included in the curriculum. But the curriculum includes all of the more important branches of public and private law, and is well designed to prepare the student for admission to the Bar of other States.

Requirements for Admission

The requirements for admission are those of the Association of American Law Schools. Applicants for admission as candidates for a degree are required to produce evidence of the completion of at least two years of college work; that is, the completion of at least one-half the work acceptable for a Bachelor's degree granted on the basis of a four-year period of study by the University of Maryland or other principal college or university in this State.

To meet this requirement, a candidate for admission must present at least sixty semester hours (or their equivalent) of college work taken in an institution approved by standard regional accrediting agencies and exclusive of

credit earned in non-theory courses in military science, hygiene, domestic arts, physical education, vocal or instrumental music, or other courses without intellectual content of substantial value. Such pre-legal work must have been done in residence, no credit being allowed for work done in correspondence or extension courses, and must have been passed with a scholastic average at least equal to the average required for graduation in the institution attended.

In compliance with the rules of the Association of American Law Schools, a limited number of special students, not exceeding 10 per cent of the average number of students admitted as beginning regular law students during the two preceding years, applying for admission with less than the academic credit required of candidates for the law degree, may be admitted as candidates for the certificate of the school, but not for the degree, where, in the opinion of the Faculty Council, special circumstances, such as the maturity and apparent ability of the student, seem to justify a deviation from the rule requiring at least two years of college work. Such applicants must be at least twenty-three years of age and specially equipped by training and experience for the study of law.

Combined Program of Study Leading to the Degrees of Bachelor of Arts and Bachelor of Laws

The University offers a combined program in arts and law leading to the degrees of Bachelor of Arts and Bachelor of Laws.

Students pursuing this combined program in college and pre-legal subjects will spend the first three years in the College of Arts and Sciences at College Park. The fourth year they will register in the School of Law, and upon the successful completion of the work of the first year in the Day School, or the equivalent work in the Evening School, the degree of Bachelor of Arts will be awarded. The degree of Bachelor of Laws will be awarded upon the completion of the work prescribed for graduation in the School of Law.

Details of the combined course may be had upon application to the Registrar, University of Maryland, College Park, Md., or by reference to page 110.

Advanced Standing

Students complying with the requirements for admission to the school who have, in addition, successfully pursued the study of law elsewhere in an approved law school, may, in the discretion of the Faculty Council, upon presentation of a certificate from such law school showing an honorable dismissal therefrom, and the successful completion of equivalent courses therein, covering at least as many hours as are required for such subjects in this school, receive credit for such courses and be admitted to advanced standing. No credit will be given for study pursued in a law office, and

no degree will be conferred until after one year of residence and study at this school.

Fees and Expenses

The charges for instruction are as follows:

| | |
|---|---------|
| Registration fee to accompany application..... | \$ 2.00 |
| Matriculation fee, payable on first registration..... | 10.00 |
| Diploma fee, payable upon graduation..... | 15.00 |

Tuition fee, per annum:

| | |
|----------------------|----------|
| Day School | \$200.00 |
| Evening School | 150.00 |

An additional tuition fee of \$50.00 per annum must be paid by students who are non-residents of the State of Maryland.

The tuition fee is payable in two equal instalments, one-half at the time of registration for the first semester, and one-half at the time of registration for the second semester.

Further information and a special catalogue of the School of Law may be had upon application to the School of Law, University of Maryland, Redwood and Greene Streets, Baltimore, Md.

THE UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND COLLEGE OF PHYSICIANS AND SURGEONS

J. M. H. ROWLAND, *Dean*

MEDICAL COUNCIL

ARTHUR M. SHIPLEY, M.D., Sc.D.
JULIUS FRIEDENWALD, A.M., M.D.
J. M. H. ROWLAND, M.D.
ALEXIUS MCGLANNAN, A.M., M.D., LL.D.
HUGH R. SPENCER, M.D.
H. BOYD WYLIE, M.D.
CARL L. DAVIS, M.D.
MAURICE C. PINCOFFS, S.B., M.D.
FRANK W. HACHTEL, M.D.
EDWARD UHLENHUTH, Ph.D.
CLYDE A. CLAPP, M.D.
JOHN C. KRANTZ, JR., Ph.D.
WALTER D. WISE, M.D.
MAGNUS GREGERSEN, Ph.D.

The School of Medicine of the University of Maryland is one of the oldest foundations for medical education in America, ranking fifth in point of age among the medical colleges of the United States. In the school building at Lombard and Greene Streets in Baltimore was founded one of the first medical libraries and the first medical college library in the United States.

Here for the first time in America dissecting was made a compulsory part of the curriculum; here instruction in Dentistry was first given (1837); and here were first installed independent chairs for the teaching of diseases of women and children (1867), and of eye and ear diseases (1873).

This School of Medicine was one of the first to provide for adequate clinical instruction by the erection in 1823 of its own hospital, and in this hospital intramural residency for senior students first was established.

Clinical Facilities

The University Hospital, property of the University, is the oldest institution for the care of the sick in Maryland. It was opened in September, 1823, and at that time consisted of four wards, one of which was reserved for eye cases.

Besides its own hospital, the School of Medicine has control of the clinical facilities of the Mercy Hospital, in which were treated last year 23,237 persons.

In connection with the University Hospital, an outdoor obstetrical clinic is conducted. During the past year 1,614 cases were treated in the Lying In Hospital and outdoor clinic.

The hospital now has about 400 beds—for medical, surgical, obstetrical, and special cases; and furnishes an excellent supply of clinical material for third- and fourth-year students.

Dispensaries and Laboratories

The dispensaries associated with the University Hospital and Mercy Hospital are organized on a uniform plan in order that teaching may be the same in each. Each dispensary has departments of Medicine, Surgery, Obstetrics, Eye and Ear, Genito-Urinary, Gynecology, Gastro-Enterology, Cardiology, Pediatrics, Neurology, Orthopedics, Proctology, Dermatology, Throat and Nose, and Tuberculosis. All students in their junior year work two hours daily for ten weeks in one of these dispensaries; all students in the senior year work one hour each day; 111,689 cases were treated last year, which fact gives an idea of the value of these dispensaries for clinical teaching.

Laboratories conducted by the University purely for medical purposes are the Anatomical, Chemical, Experimental Physiology, Physiological Chemistry, Histology and Embryology, Pathology, Bacteriology and Immunology, Clinical Pathology, Pharmacology, and Operative Surgery.

Prizes and Scholarships

The following prizes and scholarships are offered in the School of Medicine. (For details see School of Medicine Bulletin.)

Faculty Medal; Dr. A. Bradley Gaither Prize; Dr. Samuel Leon Frank Scholarship; Hitchcock Scholarships; Randolph Winslow Scholarship; University Scholarships; Frederica Gehrmann Scholarship; Dr. Leo Karlinsky Memorial Scholarship; Clarence and Genevra Warfield Scholarships; Israel and Cecelia A. Cohen Scholarships.

Requirements for Admission

Admission to the course in medicine is by a completed Medical Student Certificate issued by the Director of Admissions of the University of Maryland, Baltimore, Maryland. This certificate is obtained on the basis of satisfactory credentials, or by examination and credentials, and is essential for admission to any class.

The requirements for the issuance of the Medical Student's Certificate are as follows:

(a) The completion of a standard four-year high school course or the equivalent in entrance examinations, and in addition:

*(b) Two years of basic college credits, including chemistry, biology, physics, modern foreign language, and English, and exclusive of Military Drill or Physical Education as outlined in the Pre-Medical Curriculum (page 103), or its equivalent. The foregoing will meet the minimum requirement for admission. Students are strongly recommended, however, to complete the three-year pre-medical curriculum before making application for admission.

Men and women are admitted on equal terms to the School of Medicine of this University.

Expenses

The following are the fees for students in the School of Medicine:

| <i>Matriculation</i> | <i>Resident—Non-Resident</i> | <i>Laboratory</i> | <i>Graduation</i> |
|----------------------|------------------------------|-------------------|-------------------|
| \$10.00 (only once) | \$400.00 \$600.00 | \$25.00 (yearly) | \$15.00† |

Estimated living expenses for students in Baltimore:

| <i>Items</i> | <i>Low</i> | <i>Average</i> | <i>Liberal</i> |
|---------------------------|--------------|----------------|----------------|
| Books | \$50 | \$75 | \$100 |
| College Incidentals | 20 | 20 | 20 |
| Board, eight months..... | 200 | 250 | 275 |
| Room rent | 64 | 80 | 100 |
| Clothing and Laundry..... | 50 | 80 | 150 |
| All other expenses..... | 25 | 50 | 75 |
| Total..... | \$409 | \$556 | \$720 |

* For admission to the Pre-Medical Curriculum the requirements are the same as for the freshman class in the College of Arts and Sciences of the University with the prescribed addition of two years of one foreign language. (See Section I, Entrance.)

†The above tuition fees applicable until the end of the session 1936 only. The right is reserved to make changes in these fees whenever the authorities deem them expedient.

SCHOOL OF NURSING

ANNIE CRIGHTON, R.N., *Director and Superintendent of Nurses*

The University of Maryland School of Nursing was established in the year 1889. Since that time it has been an integral part of the University of Maryland Hospital.

The school is non-sectarian, the only religious services being morning prayers.

The University of Maryland Hospital is a general hospital containing about 400 beds. It is equipped to give young women a thorough course of instruction and practice in all phases of nursing, including experience in the operating room.

The school offers the student nurse unusual advantages in its opportunity for varied experience and in its thorough curriculum taught by well-qualified instructors and members of the medical staff of the University.

Programs Offered

The program of study of the School is planned for two groups of students: (a) The three-year group; (b) the five-year group.

Requirements for Admission

A candidate for admission to the School of Nursing must be a graduate of an accredited high school or other recognized preparatory school, and must present record showing that she has completed satisfactorily the required amount of preparatory study. Preference will be given to students who rank in the upper third of the graduating class in their respective preparatory schools.

Candidates are required to present 15 units for entrance: Required (7), and Elective (8).

Required: English (I, II, III, IV), 3 units; algebra to quadratics, 1 unit; plane geometry, 1 unit; history, 1 unit; science, 1 unit. Total, 7 units.

Elective: Astronomy, biology, botany, chemistry, civics, drawing, economics, general science, geology, history, home economics, vocational subjects, languages, mathematics, physical geography, physics, zoology, or any other subject offered in a standard high school or preparatory school for which graduation credit is granted toward college or university entrance. Eight units must be submitted from this group, of which not more than four units may pertain to vocational subjects.

In addition to the above, students must meet certain other definite requirements in regard to health, age, and personal fitness for nursing work.

The preferable age for students registering for the three-year course is 20 to 35 years, although students may be accepted at the age of 18. Women

of superior education and culture are given preference, provided they meet the requirements in other particulars. If possible, a personal interview with the Director of the School should be arranged on Tuesday or Friday from 11:00 A. M. to 12:00 M.

Blank certificates will be furnished upon application to the Director of the School of Nursing, University of Maryland Hospital, Baltimore, Maryland.

Registration With Maryland State Board of Examiners of Nurses

By regulation of the Maryland State Board of Examiners of Nurses, all students entering schools of nursing in Maryland must, at the beginning of their course, register with the Board in order to be eligible for examination and license on completion of this course. Blanks necessary for this purpose will be sent with application forms. A fee of \$2 is charged for registration.

The fitness of the applicant for the work and the propriety of dismissing or retaining her at the end of her term of probation are left to the decision of the Director of the School. Misconduct, disobedience, insubordination, inefficiency, or neglect of duty are causes for dismissal at any time by the President of the University.

The requirements for admission to the five-year program of the School of Nursing are the same as for other colleges. (Special catalogue will be sent upon request.) The three-year program is designed to meet the requirements for the diploma in Nursing and comprises the work of the first, second, and third hospital years.

Admission to the School

Students for the spring term are admitted in February and those for the fall term in September or October, and for the five-year course in September.

Hours of Duty

During the preparatory period the students are engaged in class work for the first four months with no general duty in the hospital, and for the remainder of this period they are sent to the wards on eight-hour duty. During the first, second, and third years the students are on eight-hour day duty and nine-hour night duty with six hours on holidays and Sundays. The night-duty periods are approximately two months each with one day at the termination of each term for rest and recreation. The period of night duty is approximately five to six months during the three years.

The first four months of the preparatory period are devoted to theoretical instruction given entirely in the lecture and demonstration rooms of the training school, hospital, and medical school laboratories. The average number of hours per week in formal instruction, divided into lecture and laboratory periods, is 30 hours, and includes courses in anatomy, physiology, cookery and nutrition, dosage and solution, hygiene, bacteriology, chemistry, materia medica, practical nursing, bandaging, ethics, and history

of nursing. During the last two months of the probation period the students are placed on duty in the hospital wards for instruction in bedside nursing, and are expected to perform the duties assigned to them by the Director of the School. At the close of the first semester the students are required to pass both written and practical tests; failure to do so will be sufficient reason for terminating the course at this point.

Sickness

A physician is in attendance each day, and when ill, all students are cared for gratuitously. The time lost through illness in excess of two weeks, during the three years, must be made up. Should the authorities of the school decide that through the time lost the theoretical work has not been sufficiently covered to permit the student to continue in that year, it will be necessary for her to continue her work with the next class.

Vacations

Vacations are given between June and September. A period of four weeks is allowed the student at the completion of the first year and of the second year.

Expenses

A fee of \$50.00, payable on entrance, is required from each student. This will not be returned. A student receives her board, lodging, and a reasonable amount of laundry from the date of entrance. During her period of probation she provides her own uniforms, obtained through the hospital at a nominal cost. After being accepted as a student nurse, she wears the uniform supplied by the hospital. The student is also provided with textbooks and shoes. Her personal expenses during the course of training and instruction will depend entirely upon her individual habits and tastes.

THREE-YEAR PROGRAM

First Year

The first year is divided into two periods: the first semester, or the preparatory period (6 months), and the second semester.

First Semester

In the first semester, or preparatory term, the student is given practical instruction in the following:

- I. The making of hospital and surgical supplies, the cost of hospital material, apparatus, and surgical instruments.
- II. Household economics and preparation of foods, particularly applied to invalid cooking and nutrition.

During this term the practical work is done under constant supervision, and teaching is given correlatively.

Excursions are made to filtration and sewerage plants, markets, hygienic dairies, linen rooms, laundry, and store room.

At the close of the first half of the first year the students are required to pass both written and oral tests, and failure to do so will be sufficient reason for terminating the course at this point.

Subsequent Course

The course of instruction, in addition to the first semester, or the preparatory period, occupies two and one-half years, and students are not accepted for a shorter period, except in special instances.

After entering the wards, the students are constantly engaged in practical work under the immediate supervision and direction of the head nurses and instructors.

Throughout the three years, regular courses of instruction and lectures are given by members of the medical and nursing school faculties.

First Year

Second Semester

During this period the students receive theoretical instruction in massage, general surgery, urinalysis and laboratory methods, diet in disease, and advanced nursing procedures.

Practical instruction is received in the male and female, medical, surgical, and children's wards.

Second Year

During this period the theoretical instruction includes pediatrics; general medicine; infectious diseases; obstetrics; gynecology; orthopedics; skin and venereal; eye, ear, nose, and throat; X-ray and radium; and dental. The practical work provides experience in the nursing of obstetrical and gynecological patients, in the operating rooms and the out-patient department.

Third Year

Theoretical instruction includes psychiatry, public sanitation, professional problems, and survey of the nursing field.

During this period the student receives short courses of lectures on subjects of special interest. These include a consideration of the work of institutions, of public and private charities, of settlements, and of the various branches of professional work in nursing.

Experience is given in executive and administrative work for those showing exceptional ability in the Third Year. With these students conferences are held on administration and teaching problems.

Attendance at Classes

Attendance is required at all classes. Absences are excused by the Director of the School only in case of illness or absence from the school.

Examinations

These are both written and oral, and include practical tests. The standing of the student is based upon the general character of work throughout the year as well as the results of the examinations. Students must pass upon all subjects of each year before entering upon the work of the following year.

Graduation

The diploma of the school will be awarded to those who have completed satisfactorily the full term of three years and have passed the final examinations.

Scholarships

One scholarship has been established by the Alumnae of the Training School, which entitles a nurse to a six-weeks course at Teachers College, Columbia University, New York. This scholarship is awarded at the close of the third year to the student whose work has been of the highest excellence, and who desires to pursue post-graduate study and special work. There are two scholarships of the value of \$50.00 each, known as the Edwin and Leander M. Zimmerman and the Elizabeth Collins Lee prizes. An Alumnae Pin is presented by the Woman's Auxiliary Board to a student who at the completion of three years shows marked executive ability. A prize of \$25.00 is given by Mrs. John L. Whitehurst to a student who at the completion of three years shows exceptional executive ability.

Five-Year Program

In addition to the regular three-year course of training, the University offers a combined Academic and Nursing program leading to the degree of Bachelor of Science and a Diploma in Nursing.

The first two years of the course (or pre-hospital period), consisting of 68 semester hours, as shown on page 105 of this catalogue, are spent in the College of Arts and Sciences of the University, during which period the student has an introduction to the general cultural subjects which are considered fundamental in any college training. At least the latter of these two years must be spent in residence at College Park, in order that the student may have her share in the social and cultural activities of college life. The last three years are spent in the School of Nursing in Baltimore or in the Training School of Mercy Hospital, which is also affiliated with the School of Medicine of the University. In the fifth year of the combined program, certain elective courses such as public health nursing, nursing education, practical sociology, and educational psychology are arranged.

Degree and Diploma

The Diploma in Nursing will be awarded to those who have completed satisfactorily the three-years' program.

The degree of Bachelor of Science and the Diploma in Nursing are awarded to students who complete successfully the prescribed combined academic and nursing program.

SCHOOL OF PHARMACY

A. G. DU MEZ, *Dean*

FACULTY COUNCIL

A. G. DU MEZ, Ph.G., B.S., M.S., Ph.D.
GLENN L. JENKINS, Ph.G., B.S., M.S., Ph.D.
E. F. KELLY, Phar.D.
MARVIN R. THOMPSON, Ph.G., B.S., Ph.D.
J. CARLTON WOLF, B.Sc., Phar.D.
B. OLIVE COLE, Phar.D., LL.B.
H. E. WICH, Phar.D.

The School of Pharmacy began its existence as the Maryland College of Pharmacy. The latter was organized in 1841, and operated as an independent institution until 1904, when it amalgamated with the group of professional schools in Baltimore then known as the University of Maryland. It became a department of the present University when the old University of Maryland was merged with the Maryland State College in 1920. With but one short intermission, just prior to 1865, it has continuously exercised its function as a teaching institution.

Location

The School of Pharmacy is located at Lombard and Greene Streets, in close proximity to the Schools of Medicine, Law, and Dentistry.

AIMS

The School of Pharmacy provides systematic instruction in pharmacy, the collateral sciences, and such other subjects as are deemed to be essential in the education of a pharmacist. Its chief aim is to prepare its matriculants for the intelligent practice of dispensing pharmacy, but it also offers the facilities and instruction necessary for the attainment of proficiency in the practice of the other branches of the profession and in pharmaceutical research.

Combined Curriculum in Pharmacy and Medicine

A combined curriculum has been arranged with the School of Medicine of the University by which students may obtain the degrees of Bachelor of Science in Pharmacy and Doctor of Medicine, in seven years. Students who successfully complete the first three years of the course in pharmacy and an additional four semester hours in zoology, and show that they are qualified by character and scholarship to enter the medical profession, are eligible for admission into the School of Medicine of the University; and upon the successful completion of the first two years of the medical course will be awarded the degree of Bachelor of Science in Pharmacy by the School of Pharmacy.

This privilege will be open only to students who maintain a uniformly good scholastic record during the first two years of the course in Pharmacy; and those who wish to avail themselves of it must so advise the School of Pharmacy before entering upon the work of the third year.

Recognition

This school holds membership in the American Association of Colleges of Pharmacy. The object of the Association is to promote the interests of pharmaceutical education; and all institutions holding membership must maintain certain minimum requirements for entrance and graduation. Through the influence of this Association, uniform and higher standards of education have been adopted from time to time; and the fact that several States by law or by Board ruling recognize the standards of the Association is evidence of its influence.

The school is registered in the New York Department of Education, and its diploma is recognized in all States.

REQUIREMENTS FOR ADMISSION

The requirement for admission is graduation from an accredited high or preparatory school which requires for graduation in a four-year course not less than 15 units of high-school work grouped as shown below. In case an applicant is not a graduate of a high or preparatory school, as defined above, the full equivalent of such education in each individual case must be established and attested by the highest public educational officer of the State.

UNITS FOR ENTRANCE: Required, 7; elective, 8; total, 15.

REQUIRED: English, (I, II, III, IV), 3 units; algebra to quadratics, 1 unit; plane geometry, 1 unit; history, 1 unit; science, 1 unit. Total, 7 units.

ELECTIVE: Agriculture, astronomy, biology, botany, chemistry, civics, drawing, economics, general science, geology, history, home economics, vocational subjects, languages, mathematics, physical geography, physics, zoology, or any other subject offered in a standard high or preparatory school for which graduation credit is granted toward college or university entrance. Eight units must be submitted from this group.

An application blank for admission may be had by applying to the office of the Dean. The form must be filled out in full with names of *all* schools attended, signed by the applicant and returned to the office of the Director of Admissions with two dollars investigation fee. Do not send diplomas or certificates. The Director of Admissions of the University of Maryland will secure all necessary credentials after the application has been received. Do not make application unless reasonably certain that preparation is sufficient, or unless intending to complete preparation if insufficient. Ample time should be allowed for securing credentials and investigating schools. If the applicant qualifies for the study of the profession, a certificate will be issued.

REQUIREMENTS FOR ADVANCED STANDING

Students who present in addition to high-school requirements credit for subjects taken in schools of pharmacy holding membership in the American Association of Colleges of Pharmacy will be given credit for corresponding courses of equal length and content scheduled for the first three years of the course, provided they present a proper certificate of honorable dismissal.

Credit for general educational subjects will be given to students presenting evidence of having completed work equal in value to that outlined in this catalogue.

Transferring students in either case must satisfy the preliminary educational requirements outlined under Requirements for Admission.

SPECIAL STUDENTS

An applicant who cannot furnish sufficient entrance credit and who does not care to make up the units in which he is deficient may enter as a special student and pursue all the branches of the curriculum, but will not be eligible for graduation, and will not receive a diploma. The School of Pharmacy reserves the right to decide whether or not the preliminary training of the applicant is sufficient.

REQUIREMENTS FOR GRADUATION

Candidates for the degree of Bachelor of Science in Pharmacy (B. S. in Pharm.) must be of good moral character, and must have completed all of the prescribed work for that degree.

The work of the last year must be taken in this School.

The requirements for higher degrees are stated in the Graduate School Bulletin.

MATRICULATION AND REGISTRATION

The matriculation ticket must be procured from the office of the School of Pharmacy, and must be taken out before one enters classes. After matriculation, all students are required to register at the office of the Director of Admissions. The last date of matriculation is Sept. 26, 1936.

Expenses

| <i>Matriculation</i> | <i>Tuition</i> | | <i>Laboratory and</i> | <i>Graduation</i> |
|----------------------|------------------------------|----------|---------------------------|-------------------|
| | <i>Resident—Non-Resident</i> | | <i>Breakage</i> | |
| \$10.00 (only once) | \$200.00 | \$250.00 | \$60.00 (yearly) | \$15.00 |

Tuition for the first semester and laboratory and breakage fee shall be paid to the Comptroller at the time of registration; and tuition for the second semester and graduation fee (the latter returned in case of failure) on or before Feb. 1, 1937.

A bulletin giving details of the course in Pharmacy may be obtained by addressing the School of Pharmacy, University of Maryland, Baltimore, Maryland.

STATE BOARD OF AGRICULTURE

816 Fidelity Building, Baltimore, Maryland.

H. C. Byrd.....Executive Officer

F. K. Haszard.....Executive Secretary

The law provides that the personnel of the State Board of Agriculture shall be the same as the Board of Regents of the University of Maryland. The President of the University is the Executive Officer of the State Board of Agriculture.

General Powers of Board: The general powers of the Board as stated in Article 7 of the Laws of 1916, Chapter 391, are as follows:

"The State Board of Agriculture shall investigate the conditions surrounding the breeding, raising, and marketing of live stock and the products thereof, and contagious and infectious diseases affecting the same; the raising, distribution, and sale of farm, orchard, forest, and nursery products, generally, and plant diseases and injurious insects affecting the same; the preparation, manufacture, quality analysis, inspection, control, and distribution of animal and vegetable products, animal feeds, seeds, fertilizers, agricultural lime, agricultural and horticultural chemicals, and biological products; and shall secure information and statistics in relation thereto and publish such information, statistics, and the results of such investigations at such times and in such manner as to it shall seem best adapted to the efficient dissemination thereof; and except where such powers and duties are by law conferred or laid upon other boards, commissions, or officials, the State Board of Agriculture shall have general supervision, direction, and control of the herein recited matters, and generally of all matters in any way affecting or relating to the fostering, protection, and development of the agricultural interests of the State, including the encouragement of desirable immigration thereto, with power and authority to issue rules and regulations in respect thereof not in conflict with the Constitution and Laws of the State or the United States, which shall have the force and effect of law, and all violations of which shall be punished as misdemeanors are punished at common law; and where such powers and duties are by law conferred or laid on other governmental agencies may co-operate in the execution and performance thereof, and when so co-operating each shall be vested with such authority as is now or may hereafter by law be conferred on the other. The powers and duties herein recited shall be in addition to and not in limitation of any power and duties which now are or hereafter may be conferred or laid upon said board."

Under the above authority and by special legislation, all regulatory work is conducted under the general authority of the State Board. This includes the following services:

LIVE STOCK SANITARY SERVICE

816 Fidelity Building, Baltimore, Maryland.

This Service has charge of regulatory work in connection with the control of animal and poultry diseases, such as bovine tuberculosis, Bang's Disease, hog cholera, encephalomyelitis, rabies, anthrax, blackleg, and scabies in animals; and pullorum disease and blackhead in poultry. The Service co-operates in these activities with the U. S. Department of Agriculture.

Well equipped laboratories for research, diagnostic work, and the examination of specimens, are maintained at College Park, and a branch laboratory for the convenience of persons residing in the Northern and Western parts of the State is maintained at Lombard and Greene Streets, Baltimore.

Mark Welsh.....State Veterinarian

STATE HORTICULTURAL DEPARTMENT

College Park, Maryland.

The State Horticultural Law was enacted in 1898. It provides for the inspection of all nurseries and the suppression of injurious insects and diseases affecting plants of all kinds. The work of the department is conducted in close association with the departments of Entomology and Pathology of the University. The regulatory work is conducted under the authority of the law creating the department as well as the State Board of Agriculture. For administrative purposes, the department is placed under the Extension Service of the University on account of the close association of the work.

T. B. Symons.....Director of Extension Service

E. N. Cory.....State Entomologist

C. E. Temple.....State Pathologist

FEED, FERTILIZER, AND LIME INSPECTION SERVICE

College Park, Maryland.

The Feed, Fertilizer, and Lime Inspection Service, a branch of the Chemistry Department of the University, enforces the State regulatory statutes controlling the purity and truthful labeling of all feeds, fertilizers, and limes that are offered or exposed for sale in Maryland.

L. B. Broughton.....State Chemist

L. E. Bopst.....Associate State Chemist

SEED INSPECTION SERVICE

College Park, Maryland.

The Seed Inspection Service is placed by law under the general supervision of the Agricultural Experiment Station. This service takes samples of seed offered for sale, and tests them for quality and germination.

F. S. Holmes.....Seed Inspector

STATE DEPARTMENT OF FORESTRY

1411 Fidelity Building, Baltimore.

The Department of Forestry was created and organized to protect and develop the valuable forest resources of the State; to carry on a campaign of education; and to instruct counties, towns, corporations, and individuals as to the advantages and necessity of protecting from fire and other enemies the timber lands of the State. All correspondence and inquiries should be addressed to The State Forester, 1411 Fidelity Building, Baltimore.

Studies have been made of the timber resources of each of the twenty-three counties; and the statistics and information collected are published for free distribution, accompanied by a valuable timber map. The Department also administers six state forests, comprising about 5,000 acres. The Roadside Tree Law directs the Department of Forestry to care for trees growing within the right-of-way of any public highway in the State. A State Forest Nursery, established in 1914, is located at College Park.

F. W. Besley.....State Forester

STATE WEATHER SERVICE

The State Weather Service compiles local statistics regarding climatic conditions and disseminates information regarding the climatology of Maryland under the Regents of the University of Maryland through the State Geologist as successor to the Maryland State Weather Service Commission. The State Geologist is ex-officio Director, performing all the functions of former officers with the exception of Meteorologist, who is commissioned by the Governor and serves as liaison officer with the United States Weather Bureau. All activities except clerical are performed voluntarily. The officers are as follows:

Edward B. Mathews, Director.....Baltimore

John R. Weeks, Meteorologist, U. S. Custom House.....Baltimore

THE STATE GEOLOGICAL AND ECONOMIC SURVEY

The Geological and Economic Survey Commission is authorized under the general jurisdiction of the Board of Regents of the University of Maryland to conduct the work of this department. The State Geological and Economic Survey is authorized to make the following:

Topographic surveys showing the relief of the land, streams, roads, railways, houses, etc.

Geological surveys showing the distribution of the geological formations and mineral deposits of the State.

Agricultural soil surveys showing the areal extent and character of the different soils.

Hydrographic surveys to determine the available waters of the State for potable and industrial uses.

Magnetic surveys to determine the variation of the needle for land surveys.

A permanent exhibit of the mineral wealth of the State in the old Hall of Delegates at the State House, to which new materials are constantly added to keep the collection up-to-date.

Edward B. Mathews, State Geologist.....Baltimore

SECTION III Description Of Courses

The courses of instruction described in this section are offered at College Park. Those offered in the Baltimore Schools are described in the separate announcements issued by the several schools.

For the convenience of students in making out schedules of studies, the subjects in the following Description of Courses are arranged alphabetically:

| | Page |
|--|----------|
| Agricultural Economics | 192 |
| Agricultural Education..... | 229 |
| Agronomy (Crops and Soils)..... | 195 |
| Animal Husbandry | 197 |
| Aquiculture | 297 |
| Art | 199, 260 |
| Astronomy | 199 |
| Bacteriology and Pathology..... | 199 |
| Botany | 204 |
| Chemistry | 209 |
| Comparative Literature | 216 |
| Dairy Husbandry | 217 |
| Economics and Business Administration..... | 220 |
| Education | 223 |
| Engineering | 235 |
| English Language and Literature..... | 245 |
| Entomology | 251 |
| Farm Forestry | 254 |
| Farm Management | 254 |
| Farm Mechanics | 254 |
| French | 277 |
| Genetics and Statistics..... | 255 |
| Geology | 255 |
| German | 280 |
| Greek | 256 |
| History..... | 256 |
| Home Economics | 259 |
| Home Economics Education..... | 228 |
| Horticulture | 262 |
| Latin | 268 |
| Library Science | 269 |
| Mathematics | 269 |
| Military Science and Tactics..... | 276 |
| Modern Languages | 277 |

| | Page |
|-------------------------------|----------|
| Music | 283 |
| Philosophy | 284 |
| Physics | 286 |
| Political Science..... | 289 |
| Poultry Husbandry | 290 |
| Psychology | 225, 291 |
| Speech..... | 294 |
| Rural Life and Education..... | 229 |
| Sociology | 292 |
| Spanish | 282 |
| Zoology | 295 |

Courses for undergraduates are designated by the numbers 1-99; courses for advanced undergraduates and graduates, 100-199; courses for graduates, 200-299.

The letter following the number of the course indicates the semester in which the course is offered: thus, 1 f is offered the first semester; 1 s, the second semester; 1 y, the year. A capital S after a course number indicates that the course is offered in the summer session only.

The number of hours' credit is shown by the arabic numeral in parentheses after the title of the course.

A separate schedule of courses is issued each semester, giving the hours, places of meeting, and other information required by the student in making out his program. Students will obtain these schedules when they register.

Students are advised to consult the statements of the colleges and schools in Section II when making out their programs of studies; also Regulation of Studies, Section I.

AGRICULTURAL ECONOMICS

PROFESSOR DEVAULT; ASSOCIATE PROFESSOR WALKER; ASSISTANT PROFESSORS RUSSELL, HAMILTON.

A. E. 1 f. *Agricultural Industry and Resources* (3)—Two lectures; one laboratory. Open to sophomores.

A descriptive course dealing with agriculture as an industry and its relation to climate, physiography, soils, population centers and movements, commercial development, transportation, etc.; the existing agricultural resources of the world and their potentialities, commercial importance, and geographical distribution; the chief sources of consumption; the leading trade routes and markets for agricultural products. The history of American agriculture is briefly reviewed. Emphasis is upon the chief crop and livestock products of the United States.

A. E. 2 f. *Agricultural Economics* (3)—Three lectures. Prerequisite, Econ. 5 f or s.

A general course in agricultural economics, with special reference to population trend, agricultural wealth, land tenure, farm labor, agricultural credit, the tariff, price movements, and marketing.

For Advanced Undergraduates and Graduates

A. E. 101 s. *Transportation of Farm Products* (3)—Two lectures; one laboratory.

A study of the development of transportation in the United States, and the different facilities for transporting farm products, with special attention to such problems as tariffs, rate structure, the development of fast freight lines, refrigerator service, truck transportation of agricultural products, and observation of transportation agencies in action. Not open to students who have taken or who are taking Econ. 112s. (Russell.)

A. E. 102 s. *Marketing of Farm Products* (3)—Three lectures. Prerequisite, Econ. 5 f or s.

A complete analysis of the present system of transporting, storing, and distributing farm products, and a basis for intelligent direction of effort in increasing the efficiency of marketing methods. (DeVault.)

A. E. 103 f. *Coöperation in Agriculture* (3)—Three lectures.

Historical and comparative development of farmers' coöperative organizations with some reference to farmer movements; reasons for failure and essentials to success; commodity developments; the Federal Farm Board; banks for coöperatives; present trends. (Russell.)

A. E. 104 s. *Agricultural Finance* (3)—Three lectures.

Agricultural Credit requirements; development and volume of business of institutions financing agriculture; financing specific farm organizations and industries. *Farm insurance*—fire, crop, livestock, and life insurance with special reference to mutual development—how provided, benefits, and needed extension. (Russell.)

A. E. 105 s. *Food Products Inspection* (3)—Two lectures; one laboratory.

This course, arranged by the Department of Agricultural Economics in coöperation with the State Department of Markets and the United States Department of Agriculture, is designed to give students primary instruction in the grading, standardizing, and inspection of fruits and vegetables, dairy products, poultry products, meats, and other food products. Theoretical instruction covering the fundamental principles will be given in the form of lectures, while the demonstrational and practical work will be conducted through laboratories and field trips to Washington, D. C., and Baltimore. (Not given in 1936-1937.) (Staff.)

A. E. 106 s. *Prices* (3)—Two lectures; one laboratory.

A general course in prices, price relationships, and price analysis, with emphasis on prices of agricultural products. (Russell.)

A. E. 107 s. *Analysis of the Farm Business* (3)—One lecture; two laboratories.

A concise practical course in the keeping, summarizing, and analyzing of farm accounts. (Hamilton.)

A. E. 108 f. *Farm Organization and Operation* (3)—Three lectures.

A study of the organization and operation of Maryland farms from the standpoint of efficiency and profits. Students will be expected to make an analysis of the actual farm business and practices of different types of farms located in various parts of the State, and to make specific recommendations as to how these farms may be organized and operated as successful businesses. (Hamilton.)

A. E. 109 y. *Research Problems* (1-3).

With the permission of the instructor, students will work on any research problems in agricultural economics which they may choose, or a special list of subjects will be made up from which the students may select their research problems. There will be occasional class meetings for the purpose of making reports on progress of work, methods of approach, etc. (DeVault.)

For Graduates

A. E. 201 y. *Special Problems in Agricultural Economics* (3).

An advanced course dealing more extensively with some of the economic problems affecting the farmer; such as land problems, agricultural finance, farm wealth, agricultural prices, transportation, and special problems in marketing and coöperation. (DeVault.)

A. E. 202 y. *Seminar* (1-2).

This course will consist of special reports by students on current economic subjects, and a discussion and criticism of the same by the members of the class and the instructor. (DeVault.)

A. E. 203 y. *Research* (8).

Students will be assigned research in agricultural economics under the supervision of the instructor. The work will consist of original investigation in problems of agricultural economics, and the results will be presented in the form of theses. (DeVault.)

A. E. 210 s. *Taxation in Relation to Agriculture* (2)—Two lectures.

Principles and practices of taxation in their relation to agriculture, with special reference to the trends of tax levies, taxation in relation to land utilization, taxation in relation to ability to pay and benefits received; a comparison of the following taxes as they affect agriculture: general property tax, income tax, sales tax, gasoline and motor vehicle license taxes, inheritance tax, and special commodity taxes; possibilities of farm tax reduction through greater efficiency and economies in local government. (DeVault and Walker.)

A. E. 211 f. *Taxation in Theory and Practice* (3)—Two lectures; one laboratory period a week.

Ideals in taxation; economic effects of taxation upon the welfare of society; theory of taxation: the general property tax, business and license taxes, the income tax, the sales tax, special commodity taxes, inheritance

and estate taxes; recent shifts in taxing methods and recent tax reforms; conflicts and duplication in taxation among governmental units; practical and current problems in taxation. (DeVault and Walker.)

A. E. 212 f. *Land Utilization and Agricultural Production* (3)—Two double lecture periods a week.

A presentation by regions of the basic physical conditions of the economic and social forces that have influenced agricultural settlement, and of the resultant utilization of the land and production of farm products; followed by a consideration of regional trends and interregional shifts in land utilization and agricultural production, and the outlook for further changes in each region. (Baker.)

A. E. 213 s. *Consumption of Farm Products and Standards of Living* (3)—Two double lecture periods a week.

A presentation of the trends in population and migration for the Nation and by States, of trends in exports of farm products and their regional significance, of trends in diet and in per capita consumption of non-food products; followed by a consideration of the factors that appear likely to influence these trends in the future, and of the outlook for commercial as contrasted with a more self-sufficing agriculture. (Baker.)

A. E. 214 f. *Advanced Coöperation* (2)—Two lectures.

Intensive study of specific phases of agricultural coöperation. (Russell.)

AGRONOMY

Division of Crops

PROFESSORS METZGER, KEMP; ASSOCIATE PROFESSOR EPPLEY.

AGRON. 1 f. *Cereal Crop Production* (3)—Two lectures; one laboratory. History, distribution, adaptation, culture, improvement, and uses of cereal, forage, pasture, cover, and green manure crops.

AGRON. 2 s. *Forage Crop Production* (3)—Two lectures; one laboratory. Continuation of Agron. 1 f.

For Advanced Undergraduates and Graduates

AGRON. 102 f. *Technology of Crop Quality* (2 or 3)—Students, other than those specializing in agronomy, may register for either half of the course. Part one (*Grading Farm Crops*)—one lecture; one laboratory. The market classifications and grades as recommended by the United States Bureau of Markets, and practice in determining grades. Part two (*Grain, Hay, and Seed Judging and Identification*)—one laboratory. (Eppley.)

AGRON. 103 f. *Crop Breeding* (2)—One lecture; one laboratory. Prerequisite, Gen. 101 f.

The principles of breeding as applied to field crops, and methods used in crop improvement. (Kemp.)

AGRON. 104 f and s. *Selected Crop Studies* (1-4)—Credit according to work done. This course is intended primarily to give an opportunity for advanced study of crop problems or crops of special interest to students. (Staff.)

AGRON. 121 s. *Methods of Crop and Soil Investigations* (2)—Two lectures.

A consideration of crop investigation methods at the various experiment stations, and the standardization of such methods. (Metzger.)

For Graduates

AGRON. 201 y. *Crop Breeding* (4-10)—Credits determined by work accomplished.

The content of this course is similar to that of Agron. 103 f, but will be adapted more to graduate students, and more of a range will be allowed in choice of material to suit special cases. (Kemp.)

AGRON. 203 y. *Seminar* (2)—One report period each week.

The seminar is devoted largely to reports by students on current scientific publications dealing with problems in crops and soils.

AGRON. 209 y. *Research* (6-8)—Credit determined by work accomplished.

With the approval of the head of the department, the student will be allowed to work on any problem in agronomy, or he will be given a list of suggested problems from which he may make a selection. (Staff.)

Division of Soils

PROFESSOR BRUCE; ASSOCIATE PROFESSOR THOMAS; LECTURER THOM.

SOILS 1 f and s. *Soils and Fertilizers* (3-5)—Three lectures; two two-hour laboratory periods. Prerequisites, Geol. 1 f, Chem. 1 y, Chem. 13 s, or registration in Chem. 13 s.

A study of the principles involved in soil formation and classification. The influence of physical, chemical, and biological activities on plant growth, together with the use of fertilizers in the maintenance of soil fertility. Lectures may be taken without the laboratory.

For Advanced Undergraduates and Graduates

SOILS 102 s. *Soil Management* (3)—Two lectures; one laboratory. Prerequisite, Soils 1.

A study of the soil fertility systems of the United States, with special emphasis on the interrelation of total to available plant food, the balance of nutrients in the soil with reference to various cropping systems, and the economic and national aspect of permanent soil improvement. The practical work includes laboratory and greenhouse practice in soil improvement.

SOILS 103 f. *Soil Geography* (3)—Two lectures; one discussion period.

A study of the genealogy of soils, the principal soil regions of North America, and the classification of soils. Field trips will be made to emphasize certain important phases of the subject.

For Graduates

SOILS 204 s. *Soil Micro-Biology* (3)—Two lectures; one laboratory. Prerequisite, Bact. 1.

A study of the micro-organisms of the soil in relation to fertility. It includes the study of the bacteria of the soil concerned in the decomposition of organic matter, nitrogen fixation, nitrification, and sulphur oxidation and reduction, and deals also with such organisms as fungi, algae, and protozoa.

The course includes a critical study of the methods used by experiment stations in soil investigational work. (Thom.)

SOILS 201 y. *Special Problems and Research* (10-12).

Original investigation of problems in soils and fertilizers. (Staff.)

SOILS 202 y. *Soil Technology* (7-5 f, 2 s)—Three lectures; two laboratories first semester; two lectures second semester. Prerequisites, Geol. 1, Soils 1, and Chem. 1.

In the first semester, chemical and physico-chemical study of soil problems as encountered in field, greenhouse, and laboratory. In the second semester, physical and plant nutritional problems related to the soil.

(Thomas.)

ANIMAL HUSBANDRY

PROFESSORS MEADE and CARMICHAEL.

A. H. 1 f. *General Animal Husbandry* (3)—Two lectures; one laboratory.

Place of livestock in the farm organization. General principles underlying efficient livestock management. Brief survey of types, breeds, and market classes of livestock, together with an insight into our meat supply.

A. H. 2 s. *Elementary Livestock Judging* (2)—Two laboratories.

An introduction to livestock judging, including scoring and comparative judging of horses, beef cattle, sheep, and swine. Attention is given to the different types, breeds, and market classes of livestock.

For Advanced Undergraduates and Graduates

A. H. 101 f. *Feeds and Feeding* (3)—Two lectures; one laboratory.

Elements of nutrition; source, characteristics, and adaptability of the various feeds to the several classes of livestock. Feeding standards, the calculation and compounding of rations. (Meade.)

A. H. 102 s. *Principles of Breeding* (3)—Two lectures; one laboratory.

This course covers the practical aspects of animal breeding, including heredity, variation, selection, development, systems of breeding, and pedigree work. (Meade.)

A. H. 103 f; 104 s. *Livestock Management* (5)—Four lectures; one laboratory.

First semester instruction relates to the care, feeding, breeding, management, and marketing of beef cattle and horses. Second semester, similar instruction relative to swine and sheep. (Carmichael.)

A. H. 105 f; 106 s. *Advanced Livestock Judging* (2)—Two laboratories.

In each semester, attention is given to the judging of horses, beef cattle, sheep, and swine. Critical study of individual animals is made, and extended practice in comparative judging given. Preparation for competitive judging is stressed, and teams to represent the University in livestock judging contests may be chosen from students taking this course. (Carmichael.)

A. H. 107 s. *Study of Breeds of Livestock* (3)—Two lectures; one laboratory.

This course includes a study of the historical background of breeds; development, with special reference to recent changes; outstanding individuals and families, and more prominent blood lines; pedigree studies; advertising; public sales, catalogues, and management; private records of pure-bred herds, studs, and flocks; registration procedure; registry associations and herd books. (Carmichael.)

A. H. 108 f; 109 s. *Meat and Meat Packing* (2)—Two laboratory periods.

The slaughtering of meat animals; the handling of meat, and the process involved in the preparation, curing, and distribution of meat and its products.

A. H. 110 s. *Nutrition* (3)—Two lectures; one laboratory.

A study of digestion, assimilation, metabolism, and protein and energy requirements. Methods of investigation and studies in the utilization of feed and nutrients. (Meade.)

For Graduates

A. H. 201 y. *Special Problems in Animal Husbandry* (4-6).

Problems which relate specifically to the character of work the student is pursuing are assigned. Credit given in proportion to the amount and character of work completed. (Meade, Carmichael.)

A. H. 202 y. *Seminar* (2)—One lecture.

Students are required to prepare papers based upon their research for presentation before and discussion by the class. (Staff.)

A. H. 203 y. *Research*—Credit to be determined by the amount and character of work done.

With the approval of the head of the department, the student pursues original research in some phase of animal husbandry, carries the same to completion, and reports the results in the form of a thesis.

(Meade, Carmichael.)

ART

PROFESSOR MARTI

Art. 1 f. *Appreciation of Art I* (1)—One lecture and one hour of slide study.

An introduction to the figurative arts, and to the development of style. The material used will be taken chiefly from the history of occidental art, from Egypt to the Renaissance. Occasional visits to the museums in Washington and Baltimore. No prerequisite.

Art. 2 s. *Appreciation of Art II* (1)—One lecture and one hour of slide study.

Similar to Art 1 f. The material will be mainly European art from the Renaissance to the present. Occasional visits to museums. No prerequisite.

ASTRONOMY

PROFESSOR T. H. TALIAFERRO

ASTR. 101 y. *Astronomy* (4)—Two lectures. Elective, but open only to juniors and seniors.

An elementary course in descriptive astronomy. (Taliaferro.)

BACTERIOLOGY AND PATHOLOGY

PROFESSORS REED, BLACK; MR. FABER, MR. BARTRAM, MR. DUNNIGAN.

BACT. 1 f or s. *General Bacteriology* (4)—Two lectures; two laboratories. Sophomore year.

A brief history of bacteriology; microscopy; bacteria and their relation to nature; morphology; classification; metabolism; bacterial enzymes; application to water, milk, foods, and soils; relation to the industries and to diseases. Preparation of culture media; sterilization and disinfection; microscopic and macroscopic examination of bacteria; isolation, cultivation, and identification of aerobic and anaerobic bacteria; effects of physical and chemical agents; microbiological examinations.

BACT. 1 A f or s. *General Bacteriology* (2)—Two lectures. Sophomore year. Prerequisite, consent of instructor.

This course consists of the lectures only of Bact. 1.

BACT. 2 s. *Pathogenic Bacteriology* (4)—Two lectures; two laboratories. Sophomore year. Prerequisite, Bact. 1. Registration limited.

Principles of infection and immunity; characteristics of pathogenic microorganisms. Isolation and identification of bacteria from pathogenic material; effects of pathogens and their products.

BACT. 2 A s. *Pathogenic Bacteriology* (2)—Two lectures. Sophomore year. Prerequisite, Bact. 1 and consent of instructor.

This course consists of the lectures only of Bact. 2 s.

BACT. 3 s. *Household Bacteriology* (3)—Two lectures; one demonstration. Junior year. Home Economics students only.

A brief history of bacteriology; bacterial morphology, classification, and metabolism; their relation to water, milk, dairy products, and other foods; infection and immunity; personal, home, and community hygiene.

BACT. 4 s. *Sanitary Bacteriology* (1)—One lecture. Senior year. Engineering students only.

Bacteria and their application to water purification and sewage disposal.

For Advanced Undergraduates and Graduates

BACT. 101 f. *Dairy Bacteriology* (3)—One lecture; two laboratories. Junior year. Prerequisite, Bact. 1. Registration limited.

Bacteria in milk, sources and development; milk fermentation; sanitary production; care and sterilization of equipment; care and preservation of milk and cream; pasteurization; public health requirements. Standard methods of milk analysis; practice in the bacteriological control of milk supplies and plant sanitation; occasional inspection trips. (Black.)

BACT. 102 s. *Dairy Bacteriology (Continued)* (3)—One lecture; two laboratories. Junior year. Prerequisite, Bact. 101 f or Bact. 1 and consent of instructor.

Relation of bacteria, yeasts, and molds to cream, concentrated milks, starters, fermented milks, ice cream, butter, cheese, and other dairy products; sources of contamination. Microbiological analysis and control; occasional inspection trips. (Black.)

BACT. 103 f. *Hematology* (2)—Two laboratories. Junior year. Bact. 1 desirable. Registration limited.

Procuring blood; estimating the amount of hemoglobin; color index; study of red cells and leucocytes in fresh and stained preparations; numerical count of erythrocytes and leucocytes; differential count of leucocytes; sources and development of the formed elements of blood; pathological forms and counts. (Reed.)

BACT. 104 s. *Urinalysis* (2)—Two laboratories. Junior year. Bact. 1 desirable.

Physiologic, pathologic, and diagnostic significance; use of clinical methods and interpretation of results. (Reed.)

BACT. 105 f. *Comparative Anatomy and Physiology* (3)—Three lectures. Junior year.

Structure of the animal body; abnormal as contrasted with normal; the interrelationship between the various organs and parts as to structure and function. (Reed.)

BACT. 106 s. *Animal Hygiene* (3)—Three lectures or demonstrations. Junior year.

Care and management of domestic animals, with special reference to maintenance of health and resistance to disease; prevention and early recognition of disease; general hygiene; sanitation; first aid. (Reed.)

BACT. 109 f. *Pathological Technic* (3)—Three laboratories. Junior year. Bact. 1 desirable.

Examination of fresh material; fixation; decalcification; sectioning by free hand and freezing methods; celloidin and paraffin embedding and sectioning; general staining methods. (Reed.)

BACT. 110 s. *Pathological Technic (Continued)* (2-5)—Laboratory course. Junior year. Prerequisite, Bact. 109 f or consent of instructor.

Special methods in pathological investigations and laboratory procedures which may be applied to clinical diagnosis. (Reed.)

BACT. 111 f. *Food Bacteriology* (3)—One lecture; two laboratories. Junior year. Prerequisite, Bact. 1 and consent of instructor.

Bacteria, yeasts, and molds in foods; relation to preservation and spoilage; sanitary production and handling; food plant sanitation; food regulations; food infections and intoxications. Microbiological examination of normal and spoiled foods; factors affecting preservation. Offered alternate years, alternating with Bact. 125 f. (Not offered 1936-1937.) (Black.)

BACT. 112 s. *Sanitary Bacteriology* (3)—One lecture; two laboratories. Junior year. Prerequisite, Bact. 1. Registration limited.

Bacteriological and public health aspects of water supplies and water purification; swimming pool sanitation; sewage disposal, industrial wastes; disposal of garbage and refuse; municipal sanitation. Practice in standard methods for examination of water and sewage; differentiation and significance of the coli-aerogenes group; other bacteriological analyses. (Bartram.)

BACT. 115 f. *Serology* (4)—Two lectures; two laboratories. Junior year. Prerequisite, Bact. 2 s or consent of instructor. Registration limited.

Infection and resistance; agglutination, precipitation, lytic and complement fixation reactions; principles of immunity and hypersensitiveness. Preparation of necessary reagents; general immunologic technic; factors affecting reactions; applications in the identification of bacteria and diagnosis of disease. (Faber.)

BACT. 116 s. *Epidemiology* (2)—Two lectures. Junior year. Prerequisite, Bact. 1.

Epidemiology of important infectious diseases, including history, characteristic features, methods of transmission, immunization and control; periodicity; principles of investigation; public health applications. Offered alternate years, alternating with Bact. 126 s. (Not offered 1936-1937.) (Faber.)

BACT. 121 f. *Research Methods* (1)—One lecture. Senior year. Prerequisite, Bact. 1 and consent of instructor.

Methods of research; library practice; current literature; preparation of papers; research institutions, investigators; laboratory design, equipment and supplies; academic practices; professional aids. (Black.)

BACT. 122 f or s. *Advanced Methods* (2)—One lecture; one laboratory. Senior year. Prerequisite, Bact. 1 and consent of instructor. Registration limited.

Microscopy, dark field and single cell technic, photomicrography; colorimetric and potentiometric determinations; oxidation-reduction, electrophoresis; surface tension; gas analysis; special culture methods; filtration; animal care; practice in media and reagent preparation. (Bartram.)

BACT. 123 f. *Bacteriological Problems* (2-3)—Laboratory. Senior year. Prerequisite, Bact. 1 and any other courses needed for the projects. Registration limited.

Subject matter suitable to the needs of the particular student or problems as an introduction to research will be arranged. The research is intended to develop the student's initiative. The problems are to be selected, outlined, and investigated in consultation with and under the supervision of a member of the department. Results are to be presented in the form of a thesis. (Black.)

BACT. 124 s. *Bacteriological Problems (Continued)* (2-3)—Laboratory. Senior year. Prerequisite, Bact. 1 and any other courses needed for the projects. Registration limited. (Black.)

BACT. 125 f. *Clinical Methods* (3)—One lecture; two laboratories. Senior year. Prerequisite, Bact. 1 and consent of instructor.

Clinical material, diagnostic features. Methods in the qualitative and quantitative determination of important constituents of gastric contents, blood, urine, feces, and exudates. Offered alternate years, alternating with Bact. 111 f. (Bartram.)

BACT. 126 s. *Public Health* (1)—One lecture. Senior year. Bact. 1 desirable.

A series of weekly lectures on public health and its administration, by the staff members of the Maryland State Department of Health, representing each of the bureaus and divisions. Offered alternate years, alternating with Bact. 116 s. (Black, in charge.)

BACT. 127 f. *Advanced Bacteriology* (2)—Two lectures. Senior year. Prerequisite, Bact. 1 and consent of instructor.

History; genetic relationships; special morphology; bacterial variation; growth; chemical composition; action of chemical and physical agents; systematic bacteriology, classification, review of important genera. (Black.)

BACT. 128 s. *Bacterial Metabolism* (2)—Two lectures. Senior year. Prerequisite, Bact. 1, Chem. 12 f or equivalent, and consent of instructor.

Oxygen relations; enzymes; bacterial metabolism and respiration; chemical activities of microorganisms; changes produced in inorganic and organic compounds; industrial fermentations. Offered alternate years, alternating with Bact. 206 s. (Not offered 1936-1937.) (Black.)

BACT. 131 f. *Journal Club* (1)—Senior year. Prerequisites, Bact. 1 and at least one of the advanced courses.

Students will submit reports on current scientific literature or on individual problems in bacteriology, which will be discussed and criticised by members of the class and staff. (Black and Staff.)

BACT. 132 s. *Journal Club (Continued)* (1)—Senior year. Prerequisites, Bact. 1 and at least one of the advanced courses. (Black and Staff.)

For Graduates

BACT. 201 f. *Advanced General Bacteriology* (3)—One lecture; two laboratories. Prerequisite, degree in biological sciences and consent of instructor. Students with credit in an approved elementary course will not receive credit for this course.

History; microscopy; morphology; classification; metabolism; relation to industries and to diseases. Media preparation; examination of bacteria; staining; cultivation and identification of bacteria. Minor credit will not be given for Bact. 201 f unless Bact. 202 s is satisfactorily completed. (Faber.)

BACT. 202 s. *Advanced Pathogenic Bacteriology* (3)—One lecture; two laboratories. Prerequisite, Bact. 1 or 201 f or equivalent. Registration limited.

Infection and immunity; pathogenic microorganisms. Isolation, identification, and effects of pathogens. (Faber.)

BACT. 203 f. *Animal Disease Research* (2-6)—Prerequisite, degree in veterinary medicine from an approved veterinary college or consent of instructor. Laboratory and field work by assignment. (Reed.)

BACT. 204 s. *Animal Disease Research (Continued)* (2-6)—Prerequisite, degree in veterinary medicine from an approved veterinary college or consent of instructor. (Reed.)

*BACT. 205 f. *Advanced Food Bacteriology* (3)—Two lectures; one laboratory. Prerequisite, Bact., 10 hours.

Critical review of microorganisms necessary or beneficial to food products; food spoilage; theories and advanced methods in food preservation; application of bacteriological control methods to manufacturing operations.

*This course will be given in the evening. A special fee is charged. The course will not be given unless a sufficient number register. One or more of the other scheduled courses may also be given by other staff members under these conditions.

BACT. 206 s. *Physiology of Bacteria* (2)—Two lectures. Prerequisite, Bact., 10 hours and Chem. 108 s or equivalent.

Growth; chemical composition; physical characteristics; energy relationships; influence of environmental conditions on growth and metabolism; disinfection; physiological interrelationships; changes occurring in media. Offered alternate years, alternating with Bact. 128 s. (Black.)

BACT. 207 f. *Special Topics* (1)—Prerequisite, Bact., 10 hours.

Presentation and discussion of fundamental problems and special subjects. (Black.)

BACT. 208 s. *Special Topics (Continued)* (1)—Prerequisite, Bact., 10 hours. (Black.)

BACT. 209 f. *Seminar* (1)—Prerequisite, Bact., 10 hours and consent of instructor.

Conferences and reports prepared by the student on current research and recent advances in bacteriology. (Black.)

BACT. 210 s. *Seminar (Continued)* (1)—Prerequisite, Bact., 10 hours and consent of instructor. (Black.)

BACT. 211 f. *Research* (1-6)—Laboratory. Prerequisites, Bact. 1 and any other courses needed for the particular projects. Credit will be determined by the amount and character of the work accomplished.

Properly qualified students will be admitted upon approval of the department head and with his approval the student may select the subject for research. The investigation is outlined in consultation with and pursued under supervision of a faculty member of the department. The results obtained by a major student working towards an advanced degree are presented as a thesis, a copy of which must be filed with the department. (Black.)

BACT. 212 s. *Research (Continued)* (1-6)—Laboratory. Prerequisites, Bact. 1 and any other courses needed for the particular projects. (Black.)

BOTANY

PROFESSORS APPLEMAN, NORTON, TEMPLE;

ASSOCIATE PROFESSOR BAMFORD; ASSISTANT PROFESSORS GREATHOUSE,

PARKER; MR. WOODS, MR. McCANN, MR. TILLSON, MR. REYNARD,

MR. SHIRK, MR. STUART.

A. General Botany and Morphology

BOT. 1 f. *General Botany* (4)—Two lectures; two laboratories.

General introduction to botany, touching briefly on all phases of the subject. The chief aim in this course is to present fundamental biological principles rather than to lay the foundation for professional botany. The student is also acquainted with the true nature and aim of botanical science, its methods, and the value of its results.

BOT. 2 s. *General Botany* (4)—Two lectures; two laboratories. Prerequisite, Bot. 1.

A study of algae, bacteria, fungi, liverworts, mosses, ferns, and seed plants. The development of reproduction, adjustment of plants to land, habit of growth, and the attendant changes in vascular and anatomical structures are stressed. Several field trips will be arranged. With Bot. 1, a cultural course intended also as foundational to a career in the plant sciences.

BOT. 3 s. *Introductory Botany* (3)—Two lectures; one demonstration or laboratory period.

A course similar to Bot. 1 f, except that only one demonstration or laboratory period is required.

BOT. 4 s. *Local Flora* (2)—Two laboratories.

A study of common plants, both wild and cultivated, and the use of keys, floral manuals, and other methods of identifying them. Largely field work.

For Advanced Undergraduates and Graduates

BOT. 101 f. *Plant Anatomy* (3)—One lecture; two laboratories. Prerequisite, Bot. 1.

The origin and development of the organs and tissue systems in the vascular plants, with special emphasis on the structures of roots, stems, and leaves. Reports of current literature are required. (Bamford.)

BOT. 102 f. *Mycology* (4)—Two lectures; two laboratories.

An introductory study of the morphology, life histories, classification, and economics of the fungi. Methods of cultivating fungi and identification of plant pathogens constitute a part of the laboratory work. (Norton.)

BOT. 103 f. *Plant Taxonomy* (3)—One lecture; two laboratories.

Classification of the vegetable kingdom, and the principles underlying it; the use of other sciences and all phases of botany as taxonomic foundations; methods of taxonomic research in field, garden, herbarium, and library. Each student to work on a special problem during some of the laboratory time. (Norton.)

BOT. 104 s. *Advanced Plant Taxonomy* (3)—One lecture; two laboratories.

Principles and criteria of plant taxonomy. Reviews and criticisms of current taxonomic literature. Each student works on an original problem during the laboratory time. (Not given in 1936-1937.) (Norton.)

BOT. 105 s. *Economic Plants* (2)—Two lectures.

The names, taxonomic position, native and commercial geographic distribution, and use of the leading economic plants of the world are studied. By examination of plant products from markets, stores, factories, and gardens, students become familiar with the useful plants both in the natural form and as used by man. (Norton.)

BOT. 106 f. *History and Philosophy of Botany* (1)—One lecture. Discussion of the development of ideas and knowledge about plants, also a survey of contemporary work in botanical science. (Norton.)

BOT. 107 f or s. *Methods in Plant Histology* (2)—Two laboratories. Principles and methods involved in the preparation of permanent slides. (Bamford.)

For Graduates

BOT. 201 s. *Cytology* (4)—Two lectures; two laboratories. Prerequisite, Bot. 1 f.

A detailed study of the cell during its metabolic and reproductive stages. The major portion is devoted to chromosomes in mitosis and meiosis, and the relation of these stages to current theories of heredity and evolution. The laboratory involves the preparation, examination, and illustration of cytological material by current methods. (Bamford.)

BOT. 203 f and s. *Seminar* (1).

The study of special topics in plant morphology, anatomy, and cytology. (Bamford.)

BOT. 204. *Research*—Credit according to work done. (Norton, Bamford.)

NOTE: See announcement on page 299 for further botany courses given at the Chesapeake Biological Laboratory.

B. Plant Pathology

PLT. PATH. 1 f. *Diseases of Plants* (4)—Two lectures; two laboratories. Prerequisite, Bot. 1 f.

An introductory study in the field, in the laboratory, and in the literature, of symptoms, causal agents, and control measures of the diseases of plants. The work is so arranged that a student may devote part of his time to the important diseases of the plants in which he is particularly interested.

For Advanced Undergraduates and Graduates

PLT. PATH. 101 s. *Diseases of Fruits* (2-4)—Two lectures; laboratory according to credit desired. Prerequisite, Plt. Path. 1 f.

An intensive study intended to give a rather thorough knowledge of the subject matter, such as is needed by those who expect to become advisers in fruit production, as well as those who expect to become specialists in plant pathology. (Temple.)

PLT. PATH. 102 s. *Diseases of Garden and Field Crops* (2-4)—Two lectures; laboratory according to credit desired. Prerequisite, Plt. Path. 1 f.

The diseases of garden crops, truck crops, cereal and forage crops. Intended for students of vegetable culture, agronomy, and plant pathology, and for those preparing for county agent work. (Temple.)

PLT. PATH. 103 s. *Research Methods* (2)—One conference and five hours of laboratory and library work. Prerequisite, Plt. Path. 1 f or equivalent.

Technic of plant disease investigations: sterilization, culture media, isolation of pathogens, inoculation methods, single-spore methods, disinfectants, fungicides, photography, preparation of manuscripts, and the literature in the scientific journals and bulletins on these subjects. (Temple.)

PLT. PATH. 104 f and s. *Minor Investigations* (1-3)—Credit according to work done. A laboratory course with conferences. Prerequisite, Plt. Path. 1 f.

In this course the student may enter or withdraw at any time, including the summer months, and receive credit for the work accomplished. Only minor problems or special phases of major investigations may be undertaken. Their solution may include a survey of the literature on the problem under investigation and both laboratory and field work. (Temple, Norton.)

PLT. PATH. 105 s. *Diseases of Ornamentals* (2)—One lecture; one laboratory.

The most important diseases of plants growing in greenhouse, flower garden, and landscape, including shrubs and shade trees. (Temple.)

PLT. PATH. 106 y. *Seminar* (1).

Conferences and reports on plant pathological literature and on recent investigations. (Temple.)

PLT. PATH. 107 f. *Plant Disease Control* (3)—Two lectures; one laboratory. Prerequisite, Plt. Path. 1 f.

An advanced course dealing with the theory and practice of plant disease control; the preparation of sprays and other fungicides and the testing of their toxicity in greenhouse and laboratory; demonstration and other extension methods adapted to county agent work and to the teaching of agriculture in high schools. (Temple.)

For Graduates

PLT. PATH. 201 f. *Virus Diseases* (2)—Two lectures.

An advanced course, including a study of the current literature on the subject and the working of a problem in the greenhouse. (Temple.)

PLT. PATH. 203 s. *Non-Parasitic Diseases* (3)—Two lectures; one laboratory.

Effects of maladjustment of plants to their environment; injuries due to climate, soil, gases; dusts and sprays, fertilizers; improper treatment and other detrimental conditions. (Norton.)

PLT. PATH. 205 y. *Research*—Credit according to work done.

(Norton, Temple.)

C. Plant Physiology

For Advanced Undergraduates and Graduates

PLT. PHYS. 101 f. *Plant Physiology* (4)—Two lectures; two laboratories. Prerequisite, Bot. 1 f.

A summary view of the general physiological activities of plants. The aim in this course is to stress principles rather than factual details.

PLT. PHYS. 102 s. *Plant Ecology* (3)—Two lectures; one laboratory. Prerequisite, Bot. 1 f.

The study of plants in relation to their environments. Plant formations and successions in various parts of the country are briefly treated. Much of the work, especially the practical, must be carried on in the field, and for this purpose type regions adjacent to the University are selected.

For Graduates

PLT. PHYS. 201 s. *Plant Biochemistry* (4)—Two lectures; two laboratories. Prerequisite, an elementary knowledge of plant physiology and organic chemistry.

An advanced course in plant physiology, in which the chemical aspects are especially emphasized. It deals with the important substances in the composition of the plant body and with the important processes in plant life. (Appleman, Parker.)

PLT. PHYS. 202 f. *Plant Biophysics* (4)—Two lectures; two laboratories. Prerequisites, Bot. 1 f and Plt. Phys. 101 f or equivalent. An elementary knowledge of physics or physical chemistry is highly desirable.

An advanced course dealing with the operation of physical forces in life processes and physical methods of research in plant physiology. Practice in recording meteorological data constitutes a part of the course. (Greathouse.)

PLT. PHYS. 203 s. *Plant Microchemistry* (2)—One lecture; one laboratory. Prerequisites, Bot. 1 f, Chem. 1 y, or equivalents.

The isolation, identification, and localization of organic and inorganic substances found in plant tissues by micro-technical methods. The use of these methods in the study of metabolism in plants is emphasized. (Parker.)

PLT. PHYS. 204 f. *Growth and Development* (2). (Appleman.)

PLT. PHYS. 205 f and s. *Seminar* (1).

Students are required to prepare reports on papers in the current literature. These are discussed in connection with the recent advances in the subject. (Appleman.)

PLT. PHYS. 206 y. *Research*—Credit according to work done.

Students must be specially qualified by previous work to pursue with profit the research to be undertaken. (Appleman, Greathouse, Parker.)

CHEMISTRY

PROFESSORS BROUGHTON, DRAKE, HARING, McDONNELL;

ASSOCIATE PROFESSORS WHITE, WILEY;

ASSISTANT PROFESSOR MACHWART;

DR. SUPPLEE, DR. WEILAND, DR. WHITE, MR. ADAMS, MR. BROOKS,

MR. CAMPBELL, MR. CARHART, MR. DUVALL, MR. HASKINS,

MR. HELLER, MR. HERSBERGER, MR. HORNE, MR. HOWARD,

MR. INGERSOLL, MR. LOWE, MR. STIMPSON, MR. ZAPPONI.

A. General Chemistry

CHEM. 1 A y. *General Chemistry* (8)—Two lectures; two laboratories.

A study of the non-metals and metals. One of the main purposes of the course is to develop original work, clear thinking, and keen observation.

Course A is intended for students who have never studied chemistry, or have passed their high school chemistry with a grade lower than B.

CHEM. 1 B y. *General Chemistry* (8)—Two lectures; two laboratories.

This course covers the same ground as Chem. 1 A y; but the subject matter is taken up in more detail, with emphasis on chemical theory and important generalization. The laboratory work deals with fundamental principles, the preparation and purification of compounds, and a systematic qualitative analysis of the more common metals and acid radicals.

Course B is intended for students who have passed an approved high school chemistry course with a grade not lower than B.

CHEM. 2 y. *Qualitative Analysis* (6)—Two lectures; one laboratory the first semester; and one lecture; two laboratories the second semester. Prerequisite, Chem. 1 y.

A study of the reactions of the common metals and the acid radicals, their separation and identification, and the general underlying principles.

CHEM. 3 y. *Introductory Chemistry* (6)—Two lectures; one demonstration.

The subject matter is essentially the same as that of Chem. 1 A y. This course is designed for students desiring a working knowledge of elementary chemistry, without the laboratory part. It is not accepted as a prerequisite for advanced chemistry courses. If one subsequently desires credit for Chem. 1 y, he may secure this by adding two credits in the laboratory of Chem. 1 y s. A demonstration fee of five dollars is required.

For Advanced Undergraduates and Graduates

CHEM. 104 f. *Advanced Inorganic Chemistry* (4)—Two lectures; two laboratories. Prerequisite, Chem. 2 y. Lectures may be taken without laboratory.

This course is an advanced study of the general principles of inorganic chemistry. Special emphasis is given to the reactions and the more unusual

properties of the common elements. Laboratory experiments are selected which involve important theoretical considerations. (White.)

For Graduates

CHEM. 200 A y. *Chemistry of the Rarer Elements* (4)—Two lectures. Prerequisite, Chem. 2 y.

The course is devoted to a study of the elements not usually considered in the elementary course. (White.)

CHEM. 200 B y. *Advanced Inorganic Laboratory* (4)—Two laboratories. Prerequisite, consent of instructor.

A laboratory study of the analyses and the compounds of elements considered in Chem. 200 A y. (White.)

B. Analytical Chemistry

CHEM. 4 f or s. *Quantitative Analysis* (4)—Two lectures; two laboratories. Prerequisite, Chem. 1 y.

Quantitative analysis for pre-medical students, with special reference to volumetric methods.

CHEM. 6 y. *Quantitative Analysis* (8)—Two lectures; two laboratories. Prerequisite, Chem. 2 y.

The principal operations of gravimetric analysis. Standardization of weights and apparatus used in chemical analysis. The principal operations of volumetric analysis. Study of indicators, typical volumetric and colorimetric methods. The calculations of volumetric and gravimetric analysis are emphasized, as well as calculations relating to common ion effect. Required of all students whose major is chemistry.

For Advanced Undergraduates and Graduates

CHEM. 101 y. *Advanced Quantitative Analysis* (10)—Two lectures; three laboratories. Prerequisite, Chem. 6 y or its equivalent.

A broad survey of the field of inorganic quantitative analysis. In the first semester mineral analysis is given. Included in this is analysis of silicates, carbonates, etc. In the second semester the analysis of steel and iron is taken up. However, the student is given wide latitude as to the type of quantitative analysis he pursues during the second semester. (Wiley.)

C. Organic Chemistry

CHEM. 8 A y. *Elementary Organic Chemistry* (4)—Two lectures. Prerequisite, Chem. 1 y.

This course includes an elementary study of the fundamentals of organic chemistry, and is designed to meet the needs of students specializing in chemistry, and pre-medical students.

CHEM. 8 B y. *Elementary Organic Laboratory* (2)—One laboratory.

A course designed to familiarize the student with the fundamental methods of the organic laboratory. This course, with Chem. 8 A y, satisfies the pre-medical requirements in organic chemistry.

For Advanced Undergraduates and Graduates

CHEM. 116 y. *Advanced Organic Chemistry* (4)—Two lectures. Prerequisite, Chem. 8 A y and 8 B y or their equivalent.

This course is devoted to a more advanced study of the compounds of carbon than is undertaken in Chem. 8 A y. Graduate students who desire an accompanying laboratory course should elect Chem. 210 y. Juniors taking Chem. 116 y are expected to accompany it with Chem. 117 y, and to elect Chem. 118 y in their senior year. (Drake.)

CHEM. 117 y. *Organic Laboratory* (2)—One laboratory.

This course is devoted to an elementary study of organic qualitative analysis. The work includes the identification of unknown organic compounds, and corresponds to the more extended course, Chem. 207. (Drake.)

CHEM. 118 y. *Advanced Organic Laboratory* (2)—One laboratory.

A study of organic quantitative analysis and the preparation of organic compounds. Quantitative determinations of carbon and hydrogen, nitrogen, and halogen are carried out, and syntheses more difficult than those of Chem. 8 B y are studied. (Drake.)

For Graduates

CHEM. 203 f or s. *Special Topics in Organic Chemistry* (2-4-6)—A lecture course, which will be given any half-year when there is sufficient demand.

The course will be devoted to an advanced study of topics which are too specialized to be considered in Chem. 116 y. Topics that may be covered are dyes, drugs, carbohydrates, plant pigments, etc. The subject matter will be varied to suit best the needs of the particular group enrolled, and a student may register for the course for three semesters and acquire a total of six credits. (Drake.)

CHEM. 205 f or s. *Organic Preparations* (4)—A laboratory course, devoted to the synthesis of various organic compounds.

This course is designed to fit the needs of students whose laboratory experience has been insufficient for research in organic chemistry. (Drake.)

CHEM. 206 f or s. *Organic Microanalysis* (4)—A laboratory study of the methods of Pregl for the quantitative determination of halogen, nitrogen, carbon, hydrogen, methoxyl, etc., in very small quantities of material.

This course is open only to properly qualified students, and the consent of the instructor is necessary before enrollment. (Drake.)

CHEM. 207 f or s. *Organic Qualitative Analysis* (variable credit to suit student, with a minimum of 2 and a maximum of 6 credits.)

Laboratory work devoted to the identification of pure organic substances and of mixtures. The text used is Kamm's *Qualitative Organic Analysis*.

This course should be taken by students seeking a higher degree, whose major is organic chemistry. The work is an excellent preparation for the problems of identification one is likely to encounter while conducting research. (Drake.)

CHEM. 210 y. *Advanced Organic Laboratory* (4 or 6).

Students electing this course should elect Chem. 116 y. The content of the course is essentially that of Chem. 117 y and 118 y, but may be varied within wide limits to fit the needs of the individual student. (Drake.)

D. Physical Chemistry

CHEM. 10 y. *Elementary Physical Chemistry* (6)—Two lectures; one laboratory. Prerequisites, Chem. 1 y; Phys. 1 y; Math 16 y. Not open to sophomores.

This course, designed particularly for those unable to pursue the subject further, reviews the more theoretical points of inorganic chemistry from an advanced standpoint, and lays a good foundation for more advanced work in physical chemistry.

For Advanced Undergraduates and Graduates

CHEM. 102 A y. *Physical Chemistry* (6)—Three lectures. Prerequisites, Chem. 6 y; Phys. 2 y; Math. 16 y.

For those taking laboratory, graduate students will elect Chem. 219 f and s (4), and undergraduates Chem. 102 B y (4).

This course aims to furnish the student with a thorough background in the laws of theories of chemistry. The gas laws, kinetic theory, liquids, solutions, elementary thermodynamics, thermochemistry, equilibrium, chemical kinetics, etc., will be discussed. (Haring.)

CHEM. 102 B y. *Physical Chemistry Laboratory* (4)—Two laboratories.

This course must be taken by undergraduates who desire to take laboratory work in connection with Chem. 102 A y. (Haring.)

For Graduates

Note: CHEM. 102 A y and 102 B y or their equivalent are prerequisites for all advanced courses in physical chemistry.

CHEM. 212 A f and s. *Colloid Chemistry* (4)—Two lectures.

This is a thorough course in the chemistry of matter associated with surface energy. First semester, theory; second semester, practical applications. (Not given in 1936-1937.) (Haring.)

CHEM. 212 B f and s. *Colloid Chemistry Laboratory* (4)—Two laboratories, which must accompany or be preceded by Chem. 212 A f and s. (Not given in 1936-1937.) (Haring.)

CHEM. 213 f. *Phase Rule* (2)—Two lectures.

A systematic study of heterogeneous equilibria. One, two, and three component systems will be considered, with practical applications of each. (Haring.)

CHEM. 214 s. *Structure of Matter* (2)—Two lectures.

Subjects considered are radioactivity, isotopes, the Bohr and Lewis-Langmuir theories of atomic structure, and allied topics. (Haring.)

CHEM. 215 s. *Catalysis* (2)—Two lectures.

This course consists of lectures on the theory and applications of catalysis. (Haring.)

CHEM. 217 A f and s. *Electrochemistry* (4)—Two lectures.

A study of the principles and some of the practical applications of electrochemistry. First semester, theory; second semester, practical applications. (Haring.)

CHEM. 217 B f and s. *Electrochemistry Laboratory* (4)—Two laboratories, which must accompany or be preceded by Chem. 217 A f and s. (Haring.)

CHEM. 218 y. *Chemical Thermodynamics* (4)—Two lectures.

A study of the methods of approaching chemical problems through the laws of energy. (Not given in 1936-1937.) (Haring.)

CHEM. 219 f and s. *Physical Chemistry Laboratory* (4 or 6)—Two laboratories and one conference.

Students taking this course may elect 6 credits of lectures in Chem. 102 A y to replace the conference. (Haring.)

E. Agricultural Chemistry

CHEM. 12 A y. *Elements of Organic Chemistry* (4)—Two lectures.

The chemistry of carbon and its compounds in relation to biology. This course is particularly designed for students in Agriculture and Home Economics.

CHEM. 12 B y. *Elementary Organic Laboratory* (2)—One laboratory.

A course designed to familiarize the student with the fundamental methods of the organic laboratory. The course is designed to accompany Chem. 12 A y.

CHEM. 14 s. *Chemistry of Textiles* (3)—Two lectures; one laboratory. Prerequisite, Chem. 12 A y and Chem. 12 B f or s.

A study of the principal textile fibres, their chemical and mechanical structure. Chemical methods are given for identifying the various fibres and for a study of dyes and mordants.

For Advanced Undergraduates and Graduates

CHEM. 106 f or s. *Dairy Chemistry* (4)—One lecture; three laboratories. Prerequisite, Chem. 12 A y and Chem. 12 B y.

Lectures and assigned reading on the constituents of dairy products. This course is designed to give the student a working knowledge and laboratory practice in dairy chemistry and analysis. Practice is given in examining dairy products for confirmation under the food laws, detection of watering, detection of preservatives and added colors, and the detection of adulterants. Students showing sufficient progress may take the second semester's work, and elect to isolate and make complete analysis of the fat or protein of milk. (McDonnell.)

CHEM. 108 s. *General Physiological Chemistry* (4)—Two lectures; two laboratories. Prerequisite, Chem. 12 A y and Chem. 12 B y or their equivalent.

This course is a study of the fundamental principles of human nutrition, the chemistry of foods, digestion, absorption, assimilation, tissue composition, and excretion. The laboratory work consists of experiments in food analysis; salivary, gastric, pancreatic and intestinal digestion, and respiration. (Broughton.)

CHEM. 115 f or s. *Organic Analysis* (4)—One lecture; three laboratories. Prerequisite, Chem. 4 f or s or Chem. 12 A y and Chem. 12 B y.

This course gives a connected introductory training in organic analysis, especially as applied to plant and animal substances and their manufactured products. The greater part of the course is devoted to quantitative methods for food materials and related substances. Standard works and the publications of the Association of Official Agricultural Chemists are used freely as references. (Broughton.)

For Graduates

CHEM. 208 s. *Biological Analysis* (2)—Two laboratories.

A course in analytical methods of special value to students whose major field is the biological sciences. The work is varied to suit the needs or interests of the individual when possible. (Broughton and Supplee.)

CHEM. 221 f or s. *Tissue Analysis* (3)—Three laboratories. Prerequisite, Chem. 12 A y and 12 B y or their equivalent.

A discussion and the application of the analytical methods used in determining the inorganic and organic constituents of plant and animal tissue. (Broughton.)

CHEM. 223 A f and s. *Physiological Chemistry* (4)—Two lectures. Prerequisite, Chem. 12 A y and Chem. 12 B y or their equivalent.

An advanced course in physiological chemistry. For the first semester the course consists of lectures and assigned reading on the constitution and reactions of proteins, fats, carbohydrates, and allied compounds of biological importance. The second semester deals with enzyme action, digestion, absorption, metabolism, and excretion. (Broughton.)

CHEM. 223 B f. *Physiological Chemistry Laboratory* (2). Prerequisites, Chem. 4 f or s and Chem. 12 A y and 12 B y.

A laboratory course to accompany Chem. 223 A f. Qualitative and quantitative analysis of foods; salivary, gastric, pancreatic, and intestinal digestion; and respiration. (Broughton and Supplee.)

CHEM. 224 f or s. *Special Problems* (4-8)—A total of eight credit hours may be obtained in this course by continuing the course for two semesters. Laboratory, library, and conference work amounting to a minimum of ten hours each week. Prerequisites, Chem. 223 A f and s, and consent of instructor.

This course consists of studies of special methods, such as the separation of the fatty acids from a selected fat, the preparation of carbohydrates or amino acids, and the determination of the distribution of nitrogen in a protein. The students will choose, with the advice of the instructor, the particular problem to be studied. (Broughton.)

CHEM. 226 f or s. *Toxicology* (3)—One lecture; two laboratories.

Theory and practice of the detection and estimation of toxic substances. The laboratory work includes alkaloids, toxic gases, and inorganic poisons. (McDonnell.)

F. Industrial Chemistry

For Advanced Undergraduates and Graduates

CHEM. 110 y. *Industrial Chemistry* (6)—Three lectures. Prerequisites, Chem. 6 y and 8 y.

A study of the principal chemical industries; plant inspection, trips, and reports; the preparation of a report on some chemical industry. (Machwart.)

CHEM. 111 s. *Engineering Chemistry* (2 or 3)—Two lectures; one laboratory. This course may be taken with or without laboratory.

A study of the chemistry of engineering materials. (Machwart.)

CHEM. 113 y. *Advanced Industrial Chemistry* (6)—One lecture; two laboratories. Prerequisite, Chem. 110 y.

Unit operations typical of industrial practice; fluid flow, heat transfer, distillation, etc. Examination of materials. Plant design. Application of unit operations to a complete chemical process. (Machwart.)

CHEM. 120 f. *Elements of Chemical Engineering* (3)—Two lectures; one laboratory.

A theoretical discussion of heat transfer, pyrometry, liquid flow, humidity, air-conditioning, refrigeration, etc. (Machwart.)

For Graduates

CHEM. 222 y. *Unit Operations* (6)—Three lectures. Prerequisite, consent of instructor.

A theoretical discussion of evaporation, distillation, filtration, etc. Problems. (Machwart.)

CHEM. 225 s. *Gas Analysis* (3)—One lecture; two laboratories. Prerequisite, consent of instructor.

Quantitative determination of common gases. Flue gas and water gas analysis, including calorific determinations of the latter. Problems.
(Machwart.)

G. History of Chemistry

CHEM. 121 y. *The History of Chemistry* (2)—One lecture. Prerequisite, Chem. 1 y and Chem. 8 y or their equivalent. Required of senior students in the Department of Chemistry.

The development of chemical knowledge, and especially of the general doctrines of chemistry which have been gradually evolved, from their earliest beginnings up to the present day.
(Broughton.)

H. Seminar and Research

CHEM. 228 f and s. *Seminar* (2)—Required of all graduate students in chemistry.

Students are required to prepare reports on papers in the current literature. These are discussed in connection with the recent advances in the subject.
(The Chemistry Staff.)

CHEM. 229 f or s. *Research in Chemistry*. The investigation of special problems and the preparation of a thesis towards an advanced degree.
(The Chemistry Staff.)

COMPARATIVE LITERATURE

For Advanced Undergraduates and Graduates

The work in Comparative Literature is offered jointly by the faculties of the Department of English and the Department of Modern Languages.

A minor only may be taken in Comparative Literature. English 113 f and 114 s may be counted as Comparative Literature by students who have had Comp. Lit. 105 f and 106 s.

COMP. LIT. 101 f. *Introduction to Comparative Literature* (3)—Three lectures.

Survey of the background of European literature through study in English translations of Greek and Latin literature. Emphasis is laid on the development of the epic, tragedy, comedy, and other typical forms of literary expression. The debt of modern literature to the ancients is discussed and illustrated.
(Spann.)

COMP. LIT. 102 s. *Introduction to Comparative Literature* (3)—Three lectures.

Continuation of Comp. Lit. 101 f; study of medieval and modern Continental literature.
(Spann.)

COMP. LIT. 103 s. *Types of English Literature* (2)—Two lectures.

An historical and critical survey of the principal types of English literature, with special attention to the influence of classical myth and legend and of classical literary ideals upon English and American writers. (Not given in 1936-1937.)
(Harman.)

COMP. LIT. 104 s. *The Old Testament as Literature* (2)—Two lectures. For seniors and graduate students.

A study of the sources, development, and literary types.
(Hale.)

COMP. LIT. 105 f. *Romanticism in France* (3)—Three lectures.

Introduction to the chief authors of the Romantic movement in France. Lectures on the thought currents and literary movements of the late eighteenth and early nineteenth centuries. The reading in this course is done in English translations.
(Wilcox.)

COMP. LIT. 106 s. *Romanticism in Germany* (3)—Three lectures.

Continuation of Comp. Lit. 105 f. German literature from Buerger to Heine. The reading is done in English translations.
(Spann.)

COMP. LIT. 110 y. *The Modern Continental Drama* (2)—Two lectures.

The Continental drama of the past fifty years will be studied as an expression of modern thought and as an art form. (Not given in 1936-1937.)
(Spann.)

DAIRY HUSBANDRY

PROFESSORS MEADE, INGHAM; ASSOCIATE PROFESSOR ENGLAND;
MR. MECHAM.

D. H. 1 f or s. *Introductory Dairy Science* (3)—Two lectures; one laboratory. Sophomore year. Prerequisite, Chem. 1 y.

A general survey of the dairy industry, including its history and development, the composition of milk and its physical and chemical properties, the production and distribution of market milk, ice cream, butter, cheese, and other dairy products, and the principles involved in the common dairy manufacturing processes. The Babcock Test, other quantitative tests for fat and other constituents, simple qualitative tests for adulterants and preservatives, and visits to the University milk plant and manufacturing laboratories.

D. H. 2 f. *Dairy Breeds and Judging* (2)—One lecture; one laboratory.

An introduction to the origin, development, characteristics, and qualities of dairy breeds of cattle, with attention to elementary judging practice.

For Advanced Undergraduates and Graduates

Dairy Production

D. H. 101 y. *Dairy Production* (6)—Two lectures; one laboratory.

A study of the care, feeding, breeding, and management of the dairy herd; dairy farm buildings and equipment; A. R. testing and herd improvement; bull associations; milking machines; sanitation and the production

of clean, low bacteria count milk; dairy farm practices; fitting and showing dairy cattle; judging; record forms; pedigrees; regulations for the production of market milk; transportation; cooling; and dairymen's marketing organizations. (Ingham.)

D. H. 102 s. *Advanced Dairy Cattle Judging—Juniors-Seniors* (1 or 2)—One laboratory.

One hour credit, except for those who are selected to represent the University on the judging team. The persons composing the team and the alternate will each receive 2 hours credit.

Comparative judging of dairy cattle. Trips to various farms. Such dairy cattle judging teams as may be chosen to represent the University will be selected from among those taking this course. (Ingham.)

D. H. 103 s. *Advanced Study of Dairy Breeds* (2)—One lecture; one laboratory.

A study of the historical background, characteristics, noted individuals and families, and the more important blood lines in the Holstein, Guernsey, Ayrshire, and Jersey breeds. (Ingham.)

Dairy Manufacturing

D. H. 104 f. *Dairy Manufacturing* (5) — Two lectures; two 4 hour laboratories. Junior year. Prerequisite, D. H. 1 and Bact. 1.

The principles and practice of making casein, cheese, and butter, including a study of the physical, chemical, and biological factors involved. The laboratory practice will include visits to commercial factories. (Not given in 1936-1937.) (England.)

D. H. 105 s. *Dairy Manufacturing* (5)—Two lectures; two 4 hour laboratories. Junior year. Prerequisite, D. H. 1 and Bact. 1.

The principles and practice of making condensed milk and milk powders; and ice cream, including a study of the physical, chemical, and biological factors involved. The laboratory practice will include visits to commercial factories. (Not given in 1936-1937.) (England.)

D. H. 106 f. *Market Milk* (5)—Three lectures; two laboratories. Senior year. Prerequisite, D. H. 1 and Bact. 1.

Commercial and economic phases of market milk, with special reference to its improvement; milk as a food; shipping stations; transportation; pasteurization; clarification; standardization; refrigeration; certified milk; commercial buttermilk; acidophilus milk; milk laws; duties of milk inspectors; distribution; milk plant construction and operation. The laboratory practice includes visits to local dairies. (England.)

D. H. 107 s. *Analysis of Dairy Products* (3)—One lecture; one 4 hour laboratory (consecutive). Senior year. Prerequisite, D. H. 1, Bact. 1, Chem. 4, Chem. 12 y.

The application of chemical and bacteriological methods to commercial dairy practice; analysis by standard chemical, bacteriological, and factory methods; standardization and composition control; tests for adulterants and preservatives. (England.)

D. H. 108 s. *Grading Dairy Products* (1)—One laboratory. Junior year. Prerequisite, D. H. 1.

Market grades and the judging of milk, butter, cheese, and ice cream in the commercial field. (England, Mechem.)

D. H. 109 f. *Advanced Grading of Dairy Products* (1)—One laboratory. Senior year. Prerequisite, D. H. 108.

Advanced work on the judging of milk, butter, cheese, and ice cream.

D. H. 110 f. *Dairy Plant Experience* (3)—Junior year. Prerequisite, D. H. 1.

Twelve weeks practical experience or its equivalent (following completion of sophomore year) in an approved market milk plant or factory manufacturing dairy products. A written report of the work is required.

D. H. 111 f. *Dairy Plant Experience* (3)—Senior year. Prerequisite, D. H. 110 f.

Twelve weeks practical experience or its equivalent (following completion of junior year) in an approved market milk plant or factory manufacturing dairy products. A written report of the work is required.

For Graduates

D. H. 201 f. *Advanced Dairy Production* (3).

A study of the newer discoveries in animal nutrition, breeding, and management. Readings and assignments. (Ingham.)

D. H. 202 f. *Dairy Technology* (2)—Two lectures.

A consideration of milk and dairy products from the physio-chemical point of view. (England.)

D. H. 203 s. *Milk Products* (2)—Two lectures.

An advanced consideration of the scientific and technical aspects of milk products. (England.)

D. H. 204 y. *Special Problems in Dairying* (4-6).

Special problems which relate specifically to the work the student is pursuing will be assigned. Credit will be given in accordance with the amount and character of work done. (Staff.)

D. H. 205 y. *Seminar* (2).

Students are required to prepare papers based upon current scientific publications relating to dairying or upon their research for presentation before and discussion by the class. (Staff.)

D. H. 206 y. *Research*—Credit to be determined by the amount and quality of work done.

The student will be required to pursue, with the approval of the head of the department, an original investigation in some phase of dairy husbandry, carry the same to completion, and report results in the form of a thesis. (Meade, Ingham, England.)

ECONOMICS AND BUSINESS ADMINISTRATION

PROFESSOR BROWN; ASSOCIATE PROFESSOR WEDEBERG; ASSISTANT PROFESSORS DANIELS, PEEL; MR. CISSEL, MR. ELVOVE, MISS JACK.

ECON. 1 f. *Economic Geography and Industry* (3)—Three lectures.

A study of the economic and political factors which are responsible for the location of industries, and which influence the production, distribution, and exchange of commodities throughout the world.

ECON. 2 s. *History of World Commerce* (3)—Three lectures.

Commercial development throughout the three major periods of history; viz., Ancient, Medieval, and Modern. Special emphasis is laid upon important changes brought about by the World War.

ECON. 3 y. *Principles of Economics* (6)—Three lectures. Prerequisite, sophomore standing.

A study of the general principles of economics: production, exchange, distribution, and consumption of wealth. The study is based upon a recent text, lectures, collateral readings, and student exercises.

ECON. 5 f or s. *Fundamentals of Economics* (3)—Three lectures. Required of students in the Colleges of Engineering and Agriculture.

A study of the general principles underlying economic activity. Not open to students having credit in Econ. 3 y.

* ECON. 7 f. *Business Organization and Operation* (2)—Two lectures.

A study of the growth of large business organizations. Types of organizations are studied from the viewpoints of legal status, relative efficiency, and social effects.

A. AND F. 9 y. *Principles of Accounting* (8) — Three lectures; one laboratory.

This course has two aims; namely, to give the prospective business man an idea of accounting as a means of control, and to serve as a basic course for advanced and specialized accounting. Methods and procedure of accounting in the single proprietorship, partnership, and corporation are studied.

For Advanced Undergraduates and Graduates

* ECON. 101 f. *Money and Credit* (2) — Two lectures. Prerequisite, Econ. 3 y, or consent of the instructor.

A study of the origin, nature, and functions of money, monetary systems, credit and credit instruments, prices, interest rates, and exchanges.

(Brown.)

* ECON. 102 s. *Banking* (2)—Two lectures. Prerequisite, Econ. 101 f.

Principles and practices of banking in relation to business. Special emphasis upon the Federal Reserve System.

(Brown.)

*These courses may be used for a major or minor in the fields of Economics or Accounting and Finance.

* ECON. 103 f. *Corporation Finance* (2)—Two lectures. Prerequisite, Econ. 3 y.

Principles of financing, the corporation and its status before the law, basis of capitalization, sources of capital funds, sinking funds, distribution of surplus, causes of failures, reorganizations, and receiverships. (Brown.)

* A. AND F. 104 s. *Investments* (3) — Three lectures. Prerequisite, Econ. 3 y, and senior standing.

Principles of investment, analyzing reports, price determination, taxation of securities, corporation bonds, civil obligations, real estate securities, and miscellaneous investments. Lectures, library assignments, and chart studies. (Brown.)

* ECON. 105 f. *Insurance* (2)—Two lectures. Prerequisite, Econ. 3 y.

A survey of the major principles and practices of life and property insurance, with special reference to its relationship to our social and economic life. (Peel.)

A. AND F. 106 s. *Personnel Management* (1)—One lecture.

A study of sources of labor supply; methods of selection and placement; retention, transfer, and promotion of labor; human values as affecting labor loyalty and efficiency. (Wedeborg.)

A. AND F. 107 y. *Business Law* (6) — Three lectures. Prerequisite, junior standing.

Legal aspects of business relationships, contracts, negotiable instruments, agency, partnerships, corporations, real and personal property, and sales. (Peel.)

ECON. 109 f. *Labor Problems* (2)—Two lectures. Prerequisite, Econ. 3 y or Soc. 1 f.

The background of labor problems; labor organizations; labor legislation; unemployment and its remedies; wages, working conditions, and standards of living; agencies and programs for the promotion of industrial peace.

(Not given in 1936-1937.) (Cissel.)

A. AND F. 110 y. *Advanced Accounting* (6) — Three lectures. Prerequisite, A. and F. 9 y.

A continuation of A. and F. 9 y, with emphasis on the theory of accounting. Special phases of corporation accounting are studied. The introduction of accounting systems for manufacturing, commercial, and financial institutions. (Cissel.)

ECON. 112 s. *Inland Transportation* (3)—Three lectures. Prerequisite, Econ. 3 y or Econ. 5 f or s.

The development of inland means of transportation in the United States. This course is devoted largely to a survey of railway transportation. Some study is given to other transportation agencies. (Daniels.)

*These courses may be used for a major or minor in the fields of Economics or Accounting and Finance.

ECON. 113 f. *Public Utilities* (2)—Two lectures. Prerequisite, Econ. 3 y.

The development of public utilities in the United States, economic and legal characteristics, regulatory agencies, valuation, rate of return, and public ownership. (Peel.)

* ECON. 114 s. *Public Finance* (3)—Three lectures. Prerequisite, Econ. 3 y.

The nature of public expenditures, sources of revenue, taxation, and budgeting. Special emphasis on the practical, social, and economic problems involved. (Peel.)

* ECON. 116 s. *Principles of Foreign Trade* (3)—Three lectures. Prerequisites, Econ. 3 y, Econ. 1 f, and Econ. 2 s, or their equivalent.

The basic principles of import and export trade, as influenced by the differences in methods of conducting domestic and foreign commerce. (Daniels.)

ECON. 117 f. *History of Economic Theory* (2)—Two lectures. Prerequisite, Econ. 3 y and senior standing.

History of economic doctrines and theories from the eighteenth century to the modern period. (Peel.)

ECON. 118 s. *History of Economic Theory* (2)—Two lectures. Prerequisite, Econ. 117 f or consent of instructor.

A continuation of Econ. 117 f. (Peel.)

ECON. 119 f. *Advanced Economics* (2)—Two lectures. Prerequisite, Econ. 3 y and senior standing.

An analysis of the theories of contemporary economists. Special attention is given to the problems of value and distribution. (Brown.)

ECON. 120 s. *Applied Economics* (2)—Two lectures. Prerequisite, Econ. 119 f or consent of instructor.

Current economic problems are studied from the viewpoint of the economist. Lectures and class discussions based on assigned readings. (Brown.)

A. AND F. 121 f. *Cost Accounting* (2) — Two lectures. Prerequisite, Econ. 109 y, and consent of instructor.

Process cost accounting; specific order cost accounting; manufacturing expense; application of accounting theory; preparation of analytical statements. (Cissel.)

A. AND F. 122 s. *Cost Accounting* (2)—Two lectures. Prerequisite, A. and F. 121 f.

A continuation of A. and F. 121 f. (Wedeborg.)

*These courses may be used for a major or minor in the fields of Economics or Accounting and Finance.

A. AND F. 123 f. *Income Tax Accounting* (3)—Three lectures. Prerequisite, A. and F. 110 y, or consent of instructor.

Selected cases illustrating the definition of taxable income of individuals, corporations, and partnerships. (Wedeborg.)

A. AND F. 126 s. *Auditing* (2)—Two lectures. Prerequisite, A. and F. 110 y, or consent of instructor.

Principles of auditing, including a study of different kinds of audits, the preparation of reports, and illustrative cases or problems. (Wedeborg.)

For Graduates

ECON. 201 y. *Research* (4-6). Credit proportioned to work accomplished. (Staff.)

ECON. 203 f and s. *Seminar* (4)—Prerequisite, consent of instructor.

Discussion of major problems in the field of economic theory. Presentation of reports based upon original investigations. Designed for students in the department of Economics. (Brown.)

ECON. 205 y. *History of Economic Doctrines* (4).

Development from classical antiquity with discussions of the different schools of economics. Extensive readings, with student reports. (Peel.)

EDUCATION

PROFESSORS SMALL, COTTERMAN, SPROWLS, MACKERT, LONG;
ASSOCIATE PROFESSOR BRECHBILL; MISS SMITH,
MRS. JAMES, MRS. BARTON, MISS CLOUGH.

A. History and Principles

ED. 2 f. *Introduction to Teaching-A* (2)—Required of sophomores in Education.

A finding course, with the purpose of assisting students to decide whether they have qualities requisite to success in teaching. Study of the physical qualifications, personality traits, personal habits, use of English, speech, and habits of work; and of the nature of the teacher's work.

ED. 3 s. *Introduction to Teaching-B* (2).

A continuation of Ed. 2 f.

ED. 5 s. *Technic of Teaching* (2). Required of juniors in Education. Prerequisite, Ed. Psych. 1 f.

Educational objectives and outcomes of teaching; types of lesson; problem, project, and unit; measuring results and marking; socialization and directed study; classroom management.

ED. 6 f. *Observation of Teaching* (1-2).

Observation and preliminary participation in the classes in which supervised teaching is to be done. Reports, conferences, and criticism.

For Advanced Undergraduates and Graduates

ED. 101 f. *History of Education: Education in Europe to Approximately 1600 A. D.* (2). Prerequisite, senior standing.

A survey of the evolution in Europe of educational institutions, practices and theory from the Greco-Roman era and through the Christian era up to and including the Reformation. (Small.)

ED. 102 s. *History of Modern Education* (2).

A continuation of Ed. 101 f. Attention is centered upon the creators of modern education and the development of education in America. (Small.)

ED. 103 s. *Principles of Secondary Education* (3). Prerequisite, Ed. Psych. 1 f and Ed. 5 s.

Evolution of the high school; European secondary education; articulation of the high school with the elementary school, college, and technical school, and with the community and the home; the junior high school; high school pupils; programs of study and the reconstruction of curricula; teaching staff; student activities. (Brechtbill.)

ED. 105 f. *Educational Sociology I* (3)—Three lectures.

A study of education as social control and emergent life, with emphasis upon the application of the recently developed concepts in modern school procedures. (Cotterman.)

ED. 107 f or s. *Comparative Education* (3).

The forces that cause different systems of education, and the characteristic differences in the educational policies and practices in various countries are studied in this course. The major emphasis is upon certain European systems. (Long.)

ED. 108 f or s. *Comparative Education* (3).

This course is similar to Ed. 107, an important difference being that education in Latin America receives major attention. (Long.)

ED. 110 f. *The Junior High School* (3).

This course considers the functions of the junior high school in the American public school system. Its development, present organization, curricula, and relation to upper and lower grades will be emphasized. (Long.)

ED. 111 f. *Lives of Scientists* (2).

A study of the major achievements and interesting incidents in the lives of the pioneers of science. Though designed especially to provide enrichment material for the use of high school teachers, the course is of general cultural value. (Not given in 1936-1937.) (Brechtbill.)

For Graduates

ED. 200 f. *Organization and Administration of Public Education* (3).

This course deals objectively with the organization, administration, curricula, and present status of public education in the United States. (Small.)

ED. 201 s. *Educational Interpretations* (3).

In this course a study is made of the social, economic, political, and cultural environment in which American educational institutions and policies have developed; and of the function of education in environmental change. (Small.)

ED. 202 s. *Higher Education in the United States* (3). One seminar period.

European backgrounds of American higher education; the development of higher education in the United States; present day adjustment movements in college; points of view in college teaching; uses of intelligence and other standardized tests; short answer examinations; course construction. (Not given in 1936-1937.) (Cotterman.)

ED. 204 s. *High School Administration and Supervision*. (3).

This course considers the principal's duties in relation to organization for operation, administration, and supervision of instruction, and community relationships. (Long.)

ED. 205 s. *Educational Sociology II* (3)—Three lectures.

This course deals with education as social adjustment through an analytical consideration of the objectives in the American program of education, methods of determining educational objectives, and a brief survey of the ways in which education has been used as social adjustment in foreign countries. (Cotterman.)

ED. 206 s. *History of American Education to 1850*. (3).

The development of the public school in America up to 1850. (Long.)

ED. 250 y. *Seminar in Education* (2-4).

Required of all candidates for the Master's degree whose majors are in the field of education. (Staff.)

(For additional courses see Rural Life and Agricultural Education and Home Economics Education.)

B. Educational Psychology

ED. PSYCH. 1 f. *Educational Psychology* (3). Required of all juniors in Education. Open to others only by special permission.

The laws of learning and habit formation in their application to teaching in the high school; types of learning and their relation to types of subject matter; psychological principles involved in lesson assignments, tests, examinations; individual differences; incentives and discipline; mental hygiene in relation to personality problems and classroom instruction.

For Advanced Undergraduates and Graduates

ED. PSYCH. 101 s. *Advanced Educational Psychology* (3). Prerequisites, Ed. Psych. 1 f and Ed. 5 s. The latter may be taken concurrently with Ed. Psych. 101 s.

Principles of genetic psychology; nature and development of the human organism; development and control of instincts. Methods of testing intelli-

gence; group and individual differences and their relation to educational practice. Methods of measuring rate of learning; study of typical learning experiments.

(Not given in 1936-1937.)

ED. PSYCH. 102 f. *Educational Measurements* (3). Prerequisites, Ed. Psych. 1 f and Ed. 5 s.

A study of typical educational problems involving educational scales and standard tests. Nature of tests, methods of use, analysis of results and practical applications in educational procedure. Emphasis is upon tests for high school subjects. (Brechtbill.)

ED. PSYCH. 105 s. *Mental Hygiene* (3). Prerequisite, Ed. Psych. 1 f or Psych. 1 f or s or equivalent.

Normal tendencies in the development of character and personality. Solving problems of adjustment to school and society; obsessions, fears, compulsions, conflicts, inhibitions, and compensations. Methods of personality analysis. (Sprowls.)

For Graduates

ED. PSYCH. 200 f. *Systematic Educational Psychology* (3).

An advanced course for teachers and prospective teachers. It deals with the major contributions of psychologists from Herbart to Watson to educational theory and practice. (Sprowls.)

ED. PSYCH. 250 y. *Seminar*.

C. Methods in High School Subjects

For Advanced Undergraduates and Graduates

Graduate credit for courses in this section will be given only by special permission of the College of Education.

ED. 120 s. *English in the High School* (2). Prerequisites, Ed. Psych. 1 f and Ed. 5 s.

Objectives in English in the different types of high schools; selection and organization of subject matter in terms of modern practice and group needs; evaluation of texts and references; bibliographies; methods of procedure and types of lessons; the use of auxiliary materials; lesson plans; measuring results. (Smith.)

ED. 122 s. *The Social Studies in the High School* (2). Prerequisites, Ed. Psych. 1 f and Ed. 5 s.

Selection and organization of subject matter in relation to the objectives and present trends in the social studies; texts and bibliographies; methods of procedure and types of lessons; the use of auxiliary materials; lesson plans; measuring results. (Long.)

ED. 124 s. *Modern Language in the High School* (2). Prerequisites, Ed. Psych. 1 f and Ed. 5 s.

Objectives of modern language teaching in the high school; selection and organization of subject matter in relation to modern practice and group needs; evaluation of texts and references; bibliographies. Methods of procedure and types of lessons; lesson plans; special devices; measuring results. (Barton.)

ED. 126 s. *Science in the High School* (2). Prerequisites, Ed. Psych. 1 f and Ed. 5 s.

Objectives of science teaching, their relation to the general objectives of secondary education; application of the principles of psychology and of teaching to the science class room situation; selection and organization of subject matter; history, trends, and status; textbooks, reference works, and laboratory equipment. Technic of class room and laboratory; measurement, standardized tests; professional organizations and literature; observation and criticism. (Brechtbill.)

ED. 128 s. *Mathematics in the High School* (2). Prerequisites, Ed. Psych. 1 f and Ed. 5 s.

Objectives; the place of mathematics in secondary education; content and construction of courses; recent trends; textbooks and equipment; methods of instruction; measurement and standardized tests; professional organizations and literature; observation and criticism. (Brechtbill.)

ED. 130 f. *High School Course of Study—Composition* (2).

Content and organization of the materials of written and oral composition in the several high school grades. (Smith.)

ED. 131 s. *High School Course of Study—Literature* (2).

Content and organization of the literature course in the several high school grades. (Smith.)

ED. 135 f. *High School Course of Study—Geometry* (2).

Content and organization of intuitive and demonstrative geometry. Methods of analysis and problem solving. (Brechtbill.)

ED. 136 f. *High School Course of Study—Biology* (2).

Content and organization of biology. (Brechtbill.)

ED. 137 s. *High School Course of Study—Physical Science* (2).

Content and organization of physics. Some consideration is given to content of chemistry. (Brechtbill.)

ED. 139 f or s. *Supervised Teaching of High School Subjects* (2).

Observation and supervised teaching. A minimum of 20 teaching periods.

E. English (Smith.)

S. S. Social Studies (Clough.)

L. Modern Language (Barton.)

Sc. Science (Brechtbill.)

M. Mathematics (Brechtbill.)

P. E. Physical Education (James, Mackert.)

C. Commercial Subjects

Ed. 140 y. *Physical Education Activities for High School Girls* (4).

Required of juniors with Physical Education major or minor.

The principles and practices of activities appropriate for both class work and extra-curriculum programs in senior and junior high schools.

(James.)

Ed. 141 f. *Physical Education in the High School* (Boys) (3)—Prerequisites, Ed. Psych. 1 f, Ed. 5 s, Phys. Ed. 25 y.

Objectives of physical education for high school boys; lesson planning; problem cases; methods of handling classes, meets, pageants, and the like; physical and medical examinations; care of equipment; records; grading.

(Mackert.)

Ed. 142 f. *Physical Education in the High School* (Girls) (3)—Prerequisites, Ed. Psych. 1 f, Ed. 5 s, Ed. 140 y.

Objectives in physical education for girls in the different types of high schools; programs appropriate to high school girls; selection and organization of subject matter; lesson plans.

(James.)

Ed. 150 f; Ed. 151 s. *Commercial Subjects in the High School* (2-6). Prerequisites, Ed. Psych. 1 f and Ed. 5 s.

Aims and methods for the teaching of shorthand, typewriting, and book-keeping in high schools.

HOME ECONOMICS EDUCATION

PROFESSOR McNAUGHTON.

H. E. Ed. 5 s. *Technic of Teaching* (2)—Required of juniors in Home Economics Education. Prerequisite, Ed. Psych. 1 f.

Philosophy of home economics education; survey of the needs of the community; analysis of the characteristics and interests of the high school girl; objectives for teaching home economics in high school; construction of units; use of problem, discussion, demonstration, and laboratory methods; selection of illustrative material; the home project.

(McNaughton.)

H. E. Ed. 6 s. *Observation of Teaching* (1-2)—Minimum of 20 class periods.

Classroom management; individual differences; types of lessons; observations and critiques; conferences.

(McNaughton.)

For Advanced Undergraduates and Graduates

H. E. Ed. 101 s. *Child Psychology* (3). Open to juniors.

Study of the nervous system; the glandular system; sensory development; habit formation; emotional controls.

(McNaughton.)

H. E. Ed. 102 f. *Child Study* (4).

The study of child development in relation to the physical, mental, and educational phases of growth; study of textbooks and magazines; adaptation of material to teaching of child care in high school; observation and participation in University Nursery School.

(McNaughton.)

H. E. Ed. 103 f or s. *Teaching Secondary Vocational Home Economics: Methods and Practice* (4). Prerequisite, H. E. Ed. 5 s.

Observation and teaching in a vocational department of a Maryland high school or in a junior high school in Washington. Organization of units, lesson plans, field trips; planning and supervision of home projects. After completing the teaching unit the student observes in home economics departments other than one in which she has taught.

(McNaughton.)

H. E. Ed. 105 f or s. *Special Problems in Child Study* (5)—Open to seniors. Prerequisite, H. E. Ed. 102 f.

Methods and practice in nursery school work in University Nursery School; making of particular studies related to the mental, emotional, or physical development of preschool children.

(McNaughton.)

H. E. Ed. 106 s. *Problems in Teaching Home Economics* (1).

Analysis of the units in the State course of study; study of various methods for organization of class period; analysis of text-books; evaluation of illustrative material.

(McNaughton.)

For Graduates

H. E. Ed. 201 f or s. *Advanced Methods of Teaching Home Economics* (2-4).

Study of social trends as applied to the teaching of home economics.

(McNaughton.)

H. E. Ed. 250 y. *Seminar in Home Economics Education* (2-4). (See Ed. 250 y.)

(McNaughton.)

H. E. Ed. 251 y. *Research* (2-4)—Credit according to work done.

Students must be specially qualified by previous work to pursue with profit the research to be undertaken.

(McNaughton.)

RURAL LIFE AND AGRICULTURAL EDUCATION

PROFESSORS COTTERMAN, CARPENTER; MR. WORTHINGTON,
MR. POFFENBERGER

For Advanced Undergraduates and Graduates

R. Ed. 101 f. *Farm Practicums and Demonstrations* (1)—One laboratory. Cannot be used for graduate credit.

This course is designed to assist the student in relating the learning acquired in the several departments of the University with the problems of

doing and demonstrating which he faces in the field and in the classroom as a teacher. It aims particularly to check his training in the essential practicums and demonstrations in vocational agriculture, and to introduce him to the conditions under which such activities must be carried on in the patronage areas and laboratories of vocational departments. Laboratory practice in deficiencies required. (Poffenberger.)

R. ED. 102 s. *Farm Practicums and Demonstrations* (1)—One laboratory. Cannot be used for graduate credit.

Continuation of R. Ed. 101 f. (Poffenberger.)

R. ED. 104 s. *Rural Life and Education* (3)—Three lectures.

An intensive study of the educational agencies at work in rural communities, stressing an analysis of school patronage areas, the possibilities of normal life in rural areas, early beginnings in rural education, and the conditioning effects of economic differences. The course is designed especially for persons who expect to be called upon to assist in shaping educational and other community programs for rural people. (Cotterman.)

R. ED. 105 f. *Project Organization and Cost Accounting* (2)—Two lectures.

The development of project programs in terms of placement opportunities; project forecasting as a form of motivation; project estimating; systems of project cost accounting; practice in project accounting. (Worthington.)

R. ED. 107 f. *Observation and the Analysis of Teaching for Agricultural Students* (3)—Two lectures; one laboratory. Prerequisite, Ed. Psych. 1 f. Open to juniors and seniors; required of seniors in Rural Life and Agricultural Education.

This course deals with an analysis of pupil learning in class groups. (Cotterman.)

R. ED. 109 f. *Teaching Secondary Vocational Agriculture* (3)—Three lectures. Prerequisites, R. Ed. 105 f, 107 f; A. H. 1, 2; D. H. 1; Poultry 1; Soils 1; Agron. 1, 2; Hort. 1, 11; F. Mech. 101, 104; A. E. 2, 102; F. M. 2.

A comprehensive course in the work of high school departments of vocational agriculture. It emphasizes particularly placement, supervised farming programs, the organization and administration of Future Farmer work, and objectives and methods in all-day, continuation, and adult instruction. (Cotterman.)

R. ED. 112 s. *Departmental Organization and Administration* (2)—Two lectures. Prerequisites, R. Ed. 107 f, 105 f, 109 f.

The work of this course is based upon the construction and analysis of administrative programs for high school departments of vocational agriculture. As a project, each student prepares and analyzes in detail an administrative program for a specific school. Investigations and reports. (Worthington.)

R. ED. 114 s. *Teaching Farm Shop in Secondary Schools* (1)—One lecture. Objectives in the teaching of farm shop; contemporary developments; determination of projects; shop management; shop programs; methods of teaching; equipment; materials of instruction; special projects. (Carpenter.)

R. ED. 120 f or s. *Practice Teaching* (2)—Prerequisites, R. Ed. 105 f, 107 f, 109 f.

Under the direction of a critic teacher the student in this course is required to analyze and prepare special units of subject matter, plan lessons, and teach in coöperation with the critic teacher, exclusive of observation, not less than twenty periods of vocational agriculture. (Cotterman, Worthington.)

ED. 105 f. *Educational Sociology* (3)—See Education.

For Graduates

R. ED. 201 f; 202 s. *Rural Life and Education* (3). Prerequisite, R. Ed. 104 s, or equivalent.

A sociological approach to rural education as a movement for a good life in rural communities. It embraces a study of the organization, administration, and supervision of the several agencies of public education as component parts of this movement and as forms of social economy and human development. Discussions, assigned readings, and major term papers in the field of the student's special interest. (Cotterman.)

R. ED. 207 f; 208 s. *Problems in Vocational Agriculture, Related Science, and Shop* (2-4).

In this course special emphasis is placed upon the current problems facing teachers of vocational agriculture. It is designed especially for persons who have had several years of teaching experience in this field. The three phases of the vocational teacher's program—all day, part-time, and adult work—receive attention. Discussions, surveys, investigations, and reports. (Cotterman.)

R. ED. 250 y. *Seminar in Rural Education* (2-4).

Problems in the organization, administration, and supervision of the several agencies of rural education. Investigations, papers, and reports. (Cotterman.)

R. ED. 251 y. *Research* (2-4). Credit hours according to work done. Students must be specially qualified by previous work to pursue with profit the research to be undertaken. (Cotterman.)

ED. 202 s. *Higher Education in the United States* (3). (See Education.)

ED. 205 s. *Educational Sociology II* (3). (See Education.)

PHYSICAL EDUCATION

A. Physical Education for Men

PROFESSOR MACKERT AND STUDENT ASSISTANTS

*PHYS. ED. 1 y. *Physical Activities* (2).

An activities course for freshman boys, meeting three periods a week throughout the year. Activities included are soccer, touch football, basketball, volleyball, baseball (soft), track, and natural gymnastics.

*PHYS. ED. 3 y. *Physical Activities* (4).

An activities course for sophomore boys, meeting three periods a week throughout the year. Activities included are soccer, touch football, basketball, volleyball, track (indoor and outdoor), baseball (soft and hard), fencing, wrestling, boxing, ping pong, horseshoes, tennis, and natural gymnastics.

PHYS. ED. 5 y. *Physical Education Practice* (2).

An activities course required of junior men, meeting three periods a week throughout the year. Activities included are gymnastics, stunts, tumbling, apparatus, games, and calisthenics.

PHYS. ED. 7 y. *Advanced Physical Education Practice* (2).

An activities course required of senior men, meeting three periods a week throughout the year. Continuation of Phys. Ed. 5 y.

PHYS. ED. 11 y. *Personal and Community Hygiene* (4).

Freshman course required of men whose major is physical education and open to other freshmen and sophomores.

This course is designed to help the incoming student live at his best and to realize the finest ideals of his group.

PHYS. ED. 13 y. *Coaching High School Athletics* (4).

Junior course required of men whose major is physical education; elective for other junior and senior students.

Football, soccer, basketball, track, and baseball are analyzed from the point of view of successful team play on an interscholastic basis. The management of athletics is studied thoroughly.

PHYS. ED. 15 y. *Management of Intramural Athletics* (4).

A senior course required of men whose major is physical education.

It is designed to give the student practice in supervising, directing, and planning the intramural program.

Prerequisite, three years of successful participation in intramural athletics.

* Students who are registered in the College of Education, or in Rural Life and Agricultural Education or Arts and Science Education curricula, and whose major or minor is Physical Education may take both Basic Military and first and second year Physical Education courses for credit. In all other curricula credit will be allowed for either Basic Military or first and second year Physical Education, but not for both.

PHYS. ED. 21 y. *Survey of Physical Education* (4).

Sophomore course required of men whose major is physical education; elective for other students.

This course is an introduction to the study of physical education. It includes a survey of the possibilities of the profession.

PHYS. ED. 23 y. *Technics of Teaching Physical Education* (4).

Junior course required of men whose major is physical education.

A thorough study of the physiological and psychological aspects of instruction in the performance of physical activities.

ED. 141 f. *Physical Education in the High School* (Boys) (3).

ED. 143 f or s. *Supervised Teaching of Physical Education* (Boys) (2).

For Graduates

**PHYS. ED. 201 y. *Administration of Health and Physical Education* (6).

This course is designed to aid in solving the multitude of problems that arise in the administration of health and physical education in public schools. An attempt will be made to set up standards for evaluating the effectiveness of programs of health and physical education. (Mackert.)

B. Physical Education for Women

MISS STAMP, ^{Mrs. J. James} ~~Mrs. James~~, DR. KARPELES

PHYS. ED. 2 y. *Personal Hygiene* (1).

Freshman course required of all women.

This course consists of instruction in hygiene one period a week throughout the year. The health ideal and its attainments, care of the body relative to diet, exercise, sleep, bathing, etc., and social hygiene.

PHYS. ED. 4 y. *Physical Activities* (1).

Freshman course required of all women.

This is an activities course, which meets two periods a week throughout the year. It will present the following phases of physical education: sports, such as hockey, soccer, basketball, baseball, speedball, archery, and volleyball; natural activities, such as tumbling and stunts; and dancing, such as clog, folk, and athletic.

PHYS. ED. 6 y. *Community Hygiene* (2).

Sophomore course required of all women.

This course is a continuation of the freshman course. The work in hygiene includes the elements of physiology, the elements of home, school, and community hygiene, and a continuation of social hygiene.

**Open to men and women.

PHYS. ED. 8 y. *Physical Activities* (2).

Sophomore course required of all women.

This course is a continuation of the work of the freshman year. In addition to the regular work, the student is permitted to elect clog, folk, or natural dancing.

†PHYS. ED. 10 y. *Fundamentals of Rhythm and Dance* (2)—One lecture a week. Required of all freshman students planning to make physical education a major, and open to other freshmen, sophomores, juniors, and seniors.

The fundamentals of rhythm, principles of class organization, suggested lesson plans for teaching various types of dancing, as well as the aims and objectives of creative dancing will be presented in this course.

PHYS. ED. 12 f. *Games* (2).

Required of all sophomores whose major is physical education, and open to other undergraduates.

This course will aim to present games and stunts suitable for the elementary school and recreational groups. Both theory and practice will be offered.

†PHYS. ED. 16 s. *First Aid* (1).

This course is required of all juniors whose major is physical education.

It presents the fundamentals necessary for caring for accidents and injuries until medical attention can be secured. Practical work will be required of all students.

PHYS. ED. 18 A f; 18 B s. *Athletics* (2-2).

Required one semester of all juniors whose major is physical education, and open to other juniors and seniors.

This course includes one lecture a week, and two periods of practical work each semester. The practical work is organized in a series of sport units, four for each semester, as shown below and designated as "practical sections." Any three of the four may be selected.

First semester (18 f): hockey, soccer, fieldball, basketball. Second semester (18 s): volleyball and handball, speedball, archery, baseball. Instruction will be given in the theory, practice, organization, and teaching of each sport.

PHYS. ED. 20 s. *Natural Gymnastics* (2).

Required of all sophomores with a major in physical education.

This course presents stunts, games, and self-testing activities based upon fundamental movements which are inherent in the race. Teaching technics will be considered and material offered which is suitable to varying age groups.

PHYS. ED. 22 s. *Organization of Athletic Activities for Girls* (2).

This course is open to juniors and seniors with a major in physical education.

†Open to men and women.

A lecture course dealing with the organization of material and the developing of athletic activities for girls in such situations as camp, school, and playground. (Given in alternate years. Not given in 1936-1937.)

PHYS. ED. 26 y. *Coaching and Officiating; Athletics for Girls* (4).

This course is open to seniors with a major in physical education. It trains the student to coach and officiate in women's athletics. Opportunity is given for the student to apply practically the theory and methods which she has learned in this class.

†PHYS. ED. 28 f. *Clogs and Athletic Dances* (2).

Two practical classes a week. Required of all sophomores planning to make physical education a major, and open to other sophomores, juniors, and seniors.

This course includes suitable teaching material for both high school boys and girls.

Tap shoes are required.

†PHYS. ED. 30 s. *Folk Dancing* (2). Two practical classes a week. Required of all sophomores planning to make physical education a major, and open to other sophomores, juniors, and seniors.

This course includes folk dances of various countries.

†PHYS. ED. 32 f or s. *Natural Dancing* (2). Two practical classes a week. This course is required of all juniors planning to make physical education a major, and is open to other juniors and seniors.

This course consists of a type of dancing based upon free and natural movements, such as skipping, walking, and running.

A special costume is required.

†PHYS. ED. 34 f or s. *Advanced Clog* (2).

Two practical classes a week. Open to all students who have had Phys. Ed. 28 f or its equivalent. This course includes more advanced and difficult dances suitable for use with both boys and girls. Tap shoes required.

Ed. 140 y. *Physical Education Activities for High School Girls* (4).

Ed. 142 f. *Physical Education in the High Schools* (Girls) (3).

ENGINEERING

PROFESSORS STEINBERG, JOHNSON, CREESE, NESBIT; ASSOCIATE PROFESSOR

HODGINS; ASSISTANT PROFESSORS HOSHALL, BAILEY, PYLE, ALLEN;

MR. HENNICK; ADDITIONAL INSTRUCTORS AND LECTURERS.

Civil Engineering

C. E. 101 s. *Hydraulics* (4)—Three lectures, one laboratory. Prerequisite, Mech. 101 f. Required of juniors in Civil Engineering.

Hydrostatic pressures on tanks, drains, and pipes. Flow through orifices, nozzles, pipe lines, canals, and weirs. Measurement of water. Elementary hydrodynamics. (Given commencing 1937-1938.)

†Open to men and women.

C. E. 102 s. *Hydraulics* (3)—Two lectures, one laboratory. Prerequisite, Mech. 103 f. Required of juniors in Electrical and Mechanical Engineering.

A shorter course than C. E. 101 s, with emphasis on water wheels, turbines, and centrifugal pumps. (Given commencing 1937-1938.)

C. E. 103 f. *Railroad Curves and Earthwork* (3)—Two lectures, one laboratory. Prerequisite, Surv. 3 y. Required of juniors in Civil Engineering.

Computation and field work for simple, compound, and reversed circular curves; easement curves; vertical and horizontal parabolic curves. Analysis of turnouts and computation of earthwork, including haul and mass diagram. (Allen.)

C. E. 104 s. *Theory of Structures* (5)—Four lectures, one laboratory. Taken concurrently with Mech. 105 y. Required of juniors in Civil Engineering.

Analytical and graphical determination of stresses in simple framed structures. Shears and moments of masonry walls, piers, and dams. Elements of the design of steel and timber members for tension, compression, and bending. The design of reinforced concrete slabs, rectangular beams, T-beams, and columns. (Allen.)

C. E. 105 f. *Elements of Highways* (3)—Two lectures, one laboratory. Prerequisite, Mech. 105 y. Required of seniors in Civil Engineering.

Location, construction, and maintenance of roads and pavements. Highway contracts and specifications, estimates of cost, highway economics. The course includes, in addition to lecture and classroom work, field inspection trips. (Steinberg.)

C. E. 106 y. *Concrete Design* (7)—Three lectures, one laboratory first semester; two lectures, one laboratory second semester. Prerequisite, C. E. 104 s. Required of seniors in Civil Engineering.

A continuation of C. E. 104 s, with special application to the design and detailing of plain and reinforced concrete structures. These will include slabs, columns, footings, beam bridges, arches, retaining walls, and dams. Elements of slope-deflection and moment distribution theories and rigid frames. (Allen.)

C. E. 107 y. *Structural Design* (7)—Three lectures, one laboratory first semester; two lectures, one laboratory second semester. Prerequisite, C. E. 104 s. Required of seniors in Civil Engineering.

A continuation of C. E. 104 s, with special application to the design and detailing of structural steel sections, members and their connections, for roof trusses, plate girders, highway and railway bridges, buildings, bracing systems, and grillage foundations. (Allen.)

C. E. 108 y. *Municipal Sanitation*. (6)—Two lectures, one laboratory. Prerequisite, Mech. 105 y. Required of seniors in Civil Engineering.

Methods of estimating consumption and designing water supply and sewerage systems.

C. E. 109 y. *Thesis* (4)—One laboratory first semester; one lecture, two laboratories second semester. Required of seniors in Civil Engineering.

The student selects, with faculty approval, a subject in civil engineering design or research. He makes such field or laboratory studies as may be needed. Weekly progress reports are required, and frequent conferences are held with the member of the faculty to whom the student is assigned for advice. A written report, including an annotated bibliography, is required to complete the thesis. (Staff.)

Drawing

DR. 1 A f. *Engineering Drawing* (2)—Two laboratories. Required of freshmen in Engineering.

Lettering, use of instruments, orthographic projection, technical sketches, dimensioning. Drawing from memory; drawing from description; inking, tracing, blueprinting, isometric and oblique projection and sections.

Course A is intended for students who have not had mechanical drawing.

DR. 1 B f. *Engineering Drawing* (2)—Two laboratories.

Advanced engineering drawing, with applications to engineering practice.

Course B is intended for students who have passed an approved high school course in mechanical drawing.

DR. 2 s. *Descriptive Geometry* (2)—One lecture; one laboratory. Prerequisite, Dr. 1 A f or Dr. 1 B f. Required of freshmen in Engineering.

Orthographic projection as applied to the solution of space problems relating to the point, line and plane. Intersection of planes with solids, development. Applications to practical problems in engineering drafting.

DR. 3 f. *Descriptive Geometry* (2)—One lecture, one laboratory. Prerequisite, Dr. 2 s. Required of sophomores in Engineering.

Continuation of Dr. 2 s, including curves, plane and space, generation of surfaces, tangent planes, intersection and development of curved surfaces. Shades, shadows, and perspective. Applications to practical problems in engineering drafting. (Given commencing 1937-1938).

DR. 4 f. *Descriptive Geometry* (3)—One lecture, two laboratories. Prerequisite, Dr. 1 A f or Dr. 1 B f. Required of sophomores in Civil Engineering.

Orthographic projection as applied to the solution of space problems relating to the point, line and plane, generation of surfaces, intersections, developments, shades, shadows, perspective.

DR. 5 f. *Descriptive Geometry* (2)—One lecture, one laboratory. Prerequisite, Dr. 1 A f or Dr. 1 B f. Required of sophomores in Electrical and Mechanical Engineering.

Orthographic projection as applied to the solution of space problems relating to the point, line and plane, intersections, developments.

Electrical Engineering

E. E. 1 y. *Elements of Electrical Engineering* (3)—One lecture first semester; one lecture and one laboratory second semester. Prerequisites, Math. 11 f, 12 f, 14 s, 15 s. Required of sophomores in Electrical Engineering.

Principles involved in flow of direct currents in conductors; current and voltage relations in simple circuits; magnetism and magnetic circuits; electromagnetic induction, dielectric circuits and condensers.

E. E. 101 y. *Principles of Electrical Engineering* (8)—Three lectures, one laboratory. Required of seniors in Mechanical Engineering. Prerequisites, Phys. 2 y, Math. 16 y and 17 y.

Study of elementary direct current and alternating current characteristics. Principles of construction and operation of direct and alternating current machinery. Experiments on the operation and characteristics of generators, motors, transformers, and control equipment.

E. E. 102 f. *Direct Currents* (6)—Four lectures, two laboratories. Prerequisites, Phys. 2 y, Math. 16 y and 17 y, and E. E. 1 y. Required of juniors in Electrical Engineering.

Construction, theory of operation and performance characteristics of direct current generators, motors, and control apparatus. Principles of construction, characteristics and operation of primary and secondary batteries and control equipment. Experiments on battery characteristics, and the operation and characteristics of direct current generators and motors. (Hodgins.)

E. E. 103 s. *Direct Current Design* (1)—One laboratory. Prerequisite, E. E. 102 f. Required of juniors in Electrical Engineering.

Materials of construction and design of the electric and magnetic circuits of direct current generators and motors. (Hodgins.)

E. E. 104 f. *Electrical Measurements* (3)—Two lectures, one laboratory. Prerequisite, Phys. 2 y, Math. 16 y and 17 y, and E. E. 1 y. Required of juniors in Electrical Engineering.

The theory and practice of important methods of precision measurement of current, voltage, resistance, capacity, and inductance. A study and calibration of commercial and laboratory instruments for direct and alternating current.

E. E. 105 s. *Alternating Current Circuits* (5)—Three lectures; two laboratories. Prerequisites, E. E. 102 f and E. E. 104 f. Required of juniors in Electrical Engineering.

Introduction to the theory of alternating current circuits, both single phase and polyphase; methods and apparatus used to measure alternating currents, voltage, and power; current and voltage relations in balanced and unbalanced polyphase systems. (Hodgins.)

E. E. 106 y. *Alternating Current Machinery* (8)—Three lectures, one laboratory. Prerequisite, E. E. 105 s. Required of seniors in Electrical Engineering.

Construction, theory of operation and performance characteristics of transformers, alternators, induction motors, synchronous motors, synchronous converters, commutator type motors, and other apparatus; tests and experiments. (Creese.)

E. E. 107 f. *Alternating Current Design* (1)—One laboratory. Prerequisites, E. E. 104 f, E. E. 105 s. Taken concurrently with E. E. 106 y. Required of seniors in Electrical Engineering.

Materials of construction and design of the electric and magnetic circuits of alternating current generators, motors, and transformers. (Hodgins.)

E. E. 108 y. *Electric Railways and Electric Power Transmission* (6)—Three lectures. Prerequisite, E. E. 105 s. Taken concurrently with E. E. 106 y. Required of seniors in Electrical Engineering.

Traffic studies, train schedules, motor characteristics, and the development of speed-distance and power-time curves, systems of control, motors and other railway equipment, electrification system for electric railways, including generating apparatus, transmission lines, substations, and distribution of electrical energy for car operation; electrification of steam roads and application of signal systems, problems in operation from the selection of proper car equipment to the substation apparatus.

Survey of the electrical equipment required in central stations and substations, transmission of electric power, practical problems illustrating the principles of installation and operation of power machinery. (Hodgins.)

E. E. 109 y. *Electrical Communications* (6)—Three lectures first semester; two lectures; one laboratory, second semester. Prerequisites, E. E. 105 s. Taken concurrently with E. E. 106 y. Required of seniors in Electrical Engineering.

Principles of wire and radio communication; telegraph and telephone systems; electron tube theory and application to wire and radio communication.

E. E. 110 y. *Illumination* (6)—Three lectures, first semester; two lectures, one laboratory second semester. Prerequisites, E. E. 105 s. Taken concurrently with E. E. 106 y. Required of seniors in Electrical Engineering.

Electric illumination; principles involved in design of lighting systems, illumination calculations, photometric measurements. (Creese.)

E. E. 111 y. *Thesis* (3)—One laboratory first semester; one lecture, one laboratory second semester. Required of seniors in Electrical Engineering.

The student selects, with faculty approval, a subject in electrical engineering design or research. He makes such field or laboratory studies as may be needed. Weekly progress reports are required, and frequent conferences are held with the member of the faculty to whom the student is assigned for advice. A written report, including an annotated bibliography, is required to complete the thesis. (Staff.)

General Engineering Subjects

ENGR. 1 f. *Introduction to Engineering* (1)—One lecture. Required of freshmen in Engineering.

A course of lectures covering the engineering professional fields, the work of the engineer, its requirements in training and character, ethics and ideals of the profession. The purpose of this course is to assist the freshman in selecting the particular field of engineering for which he is best adapted.

ENGR. 101 f. *Engineering Economy* (1)—One lecture. Required of juniors in Engineering.

A study of the economic aspects of an engineering decision; including segregation of costs and cost analysis, technic of estimating costs, and comparisons of ultimate economy. (Steinberg.)

ENGR. 102 f. *Engineering Geology* (2)—Two lectures. Required of juniors in Civil Engineering.

The fundamentals of geology with engineering applications. (Metzger.)

ENGR. 103 s. *Elements of Prime Movers* (2)—One lecture, one laboratory. Prerequisites, Phys. 2 y, Math. 16 y and 17 y. Required of juniors in Civil Engineering.

Theory and operation of steam, gas, and electric prime movers. Comparison of types of each with laboratory demonstrations.

ENGR. 104 s. *Engineering Law and Specifications* (2)—One lecture. Required of seniors in Engineering.

A study of the fundamental principles of law relating to business and to engineering; including contracts, agency, sales, negotiable instruments, corporations, and common carriers. These principles are then applied to the analysis of general and technical clauses in engineering contracts and specifications. (Steinberg and Creese.)

Mechanics

MECH. 1 s. *Statics and Dynamics* (3)—Two lectures, one laboratory. Prerequisites, Phys. 2 y, Math. 16 y and 17 y. Required of sophomores in Engineering.

Analytical and graphical solutions of coplanar and non-coplanar force systems; equilibrium of rigid bodies; suspended cables, friction, centroids and moments of inertia; kinematics and kinetics; work, power and energy.

MECH. 101 f. *Strength of Materials* (5)—Four lectures; one laboratory. Prerequisite, Mech. 1 s. Required of juniors in Civil Engineering.

Riveted joints; shear and bending moment diagrams; stresses in beams and columns; torsional stresses, rivets in eccentric connections; combined stresses; diagonal tension; deflection of beams; composite members including reinforced concrete beams. Use of American Institute of Steel Construction Handbook in solution of problems. (Given commencing 1937-1938.)

MECH. 102 s. *Materials of Engineering* (2)—One lecture, one laboratory. Taken concurrently with Mech. 104 y or Mech. 105 y. Required of juniors in Engineering.

The composition, manufacture, and properties of the principal materials used in engineering, and of the conditions that influence their physical characteristics. The interpretation of specifications and of standard tests. Laboratory work in the testing of steel, wrought iron, timber, brick, cement, and concrete.

MECH. 103 f. *Strength of Materials* (4)—Three lectures, one laboratory. Prerequisite, Mech. 1 s. Required of juniors in Electrical and Mechanical Engineering.

A shorter course than Mech. 101 f. Use of American Institute of Steel Construction Handbook in solution of problems. (Given commencing 1937-1938.)

MECH. 104 y. *Engineering Mechanics* (7)—Three lectures, one laboratory first semester; two lectures, one laboratory second semester. Prerequisites, Math. 16 y and 17 y; Phys. 2 y. Required of juniors in Electrical and Mechanical Engineering.

Applied Mechanics: the analytical study of statics dealing with the composition and resolution of forces, moments and couples, machines. The laws of friction, dynamics, work, energy, and the strength of materials.

Graphic Statics: the graphic solution of problems in mechanics, center of gravity, moments of inertia. Determination of stresses in framed structures.

Elements of Hydraulics: flow of water in pipes, through orifices and in open channels. Determination of the co-efficient of discharge, velocity, and contraction in pipes and orifices.

MECH. 105 y. *Engineering Mechanics* (9)—Four lectures, one laboratory first semester; three lectures, one laboratory second semester. Prerequisites, Math. 16 y and 17 y; Phys. 2 y. Required of juniors in Civil Engineering.

This course is similar in content to Mech. 104 y, but with greater emphasis on strength of materials and hydraulics.

Mechanical Engineering

M. E. 1 s. *Kinematics of Machinery* (2)—One lecture, one laboratory. Prerequisite, Math. 11 f, 12 f, 14 s, 15 s. Required of sophomores in Mechanical Engineering.

The application of the principles involved in determining the design and

size of bolts, screws, shafting, and gears. The theory and practice of the kinematics of machinery as applied to ropes, belts, chains, gears, and gear teeth; wheels in trains, cams, linkwork, parallel motions. Miscellaneous mechanisms and aggregate combinations.

M. E. 101 f. *Kinematics of Machinery* (3)—Two lectures, one laboratory. Prerequisite, M. E. 1 s. Required of juniors in Mechanical Engineering.

A continuation of M. E. 1 s, with special emphasis on cams, linkwork, mechanisms, and aggregate combinations. (Given commencing 1937-1938.) (Hoshall.)

M. E. 101 A y. *Kinematics and Machine Design* (6)—Two lectures, one laboratory. Prerequisites, Math. 16 y and 17 y, Phys. 2 y. Required of juniors in Mechanical Engineering.

The application of the principles involved in determining the properties and forms of machine parts. The design of bolts, screws, shafting, and gears. The theory and practice of the kinematics of machinery as applied to ropes, belts, chains, gears, and gear teeth, wheels in trains, epicyclic trains, cams, linkwood, parallel motions. Miscellaneous mechanisms and aggregate combinations. (Hoshall.)

M. E. 102 f. *Machine Design* (2)—One lecture, one laboratory. Prerequisite, Math. 16 y and 17 y, Phys. 2 y. Required of juniors in Mechanical Engineering.

The application of mechanics to the determination of stresses and the proportioning of machine parts. (Given commencing 1937-1938.)

M. E. 103 s. *Thermodynamics* (3)—Three lectures. Prerequisites, Math. 16 y and 17 y, Phys. 2 y. Required of juniors in Electrical Engineering.

The theory and application of thermodynamics to the steam engine, steam turbine, nozzles. The properties of vapors, cycles of heat and entropy, including discussion of machines and their uses. (Bailey.)

M. E. 104 s. *Thermodynamics* (5)—Five lectures. Prerequisites, Math. 16 y and 17 y, Phys. 2 y. Required of juniors in Mechanical Engineering.

The properties and fundamental equations of gases and vapors. Thermodynamics of heat cycles, air compressors, and steam engines. (Given commencing 1937-1938.)

M. E. 104 A y. *Thermodynamics* (5)—Three lectures first semester; two lectures second semester. Prerequisites, Math. 16 y and 17 y, Phys. 2 y. Required of juniors in Mechanical Engineering.

The properties and fundamental equations of gases and vapors. Thermodynamics of heat cycles, air compressors, and steam engines. (Bailey.)

M. E. 105 f. *Internal Combustion Engines* (3)—Three lectures. Prerequisites, M. E. 104 A y and Mech. 104 y. Required of seniors in Mechanical Engineering.

Theory, construction, and operation of gasoline and oil engines. Design and operation of Otto and Diesel cycle engines. (Nesbit.)

M. E. 106 f. *Heating and Ventilation* (3)—Two lectures, one laboratory. Prerequisites, Mech. 104 y, M. E. 104 A y. Required of seniors in Mechanical Engineering.

The study of types of heating and ventilating systems for a particular building; layout of piping and systems, with complete calculations and estimates of costs; fundamentals of air conditioning.

M. E. 107 s. *Refrigeration* (3)—Two lectures, one laboratory. Prerequisites, Mech. 104 y, M. E. 104 A y. Required of seniors in Mechanical Engineering.

Problems involving the different methods and processes of refrigeration. Air conditioning for offices, buildings, factories, and homes.

M. E. 108 y. *Design of Prime Movers* (6)—Two lectures, one laboratory. Prerequisites, Mech. 104 y, M. E. 104 A y. Required of seniors in Mechanical Engineering.

The design and proportioning of parts of essential prime movers for power plants, and industrial uses. (Nesbit.)

M. E. 109 s. *Design of Power Plants* (2)—One lecture, one laboratory. Taken concurrently with M. E. 108 y. Required of seniors in Mechanical Engineering.

The design of power plants, including the layout and cost of building, installation of equipment, and determination of size for most economical operation. (Nesbit.)

M. E. 110 y. *Mechanical Laboratory* (2)—One laboratory. Required of seniors in Mechanical Engineering.

Calibration of instruments, gauges, indicators, steam, gas and water meters. Indicated and brake horsepower of steam and internal combustion engines, setting of valves, tests for economy and capacity of boilers, engines, turbines, pumps, and other prime movers. Feed water heaters and condensers; B. T. U. analysis of solid, gaseous, and liquid fuels, and power plant tests. (Nesbit.)

M. E. 111 y. *Thesis* (3)—One laboratory first semester; one lecture, one laboratory second semester. Required of seniors in Mechanical Engineering.

The student selects, with faculty approval, a subject in mechanical engineering design or research. He makes such field or laboratory studies as may be needed. Weekly progress reports are required, and frequent conferences are held with the member of the faculty to whom the student is assigned for advice. A written report, including an annotated bibliography, is required to complete the thesis. (Staff.)

Shop

SHOP 1 s. *Forge Practice* (1)—One combination lecture and laboratory. Required of freshmen in Engineering.

Lectures and recitations on the principles of forging and heat treatment of steel. Demonstrations in acetylene and electric welding, brazing, cutting, and case hardening. Laboratory practice in drawing, bending, upsetting, welding, hardening, tempering, and thread cutting.

SHOP 2 f. *Machine Shop Practice* (1)—One laboratory. Required of sophomores in Electrical Engineering.

Practice in bench work, turning, planing, drilling, and pipe threading.

SHOP 3 f. *Machine Shop Practice* (2)—One lecture, one laboratory. Required of sophomores in Mechanical Engineering.

Study of the fundamental principles of machine tools, such as lathe, planer, shaper, milling machine, drilling machine, and grinding machines. Calculation for cutting threads, spur and helical gears, and fluting.

Practice in bench work, turning, planing, drilling, and pipe threading.

SHOP 101 f. *Machine Shop Practice* (1)—One laboratory. Required of juniors in Mechanical Engineering.

Advanced practice with standard machine tools. Exercises in thread cutting, surface grinding, fluting, and cutting spur and helical gears.

(Hoshall.)

SHOP 102 s. *Foundry Practice* (1)—One combination lecture and laboratory. Required of juniors in Mechanical Engineering.

Lectures and recitations on foundry products and layout, materials and equipment, hand and machine moulding, cupola practice and calculating mixes. Core making, moulding, casting in aluminum, brass, and gray iron.

(Hoshall.)

Surveying

SURV. 1 f. *Elements of Plane Surveying* (1)—Combined lecture and laboratory work. Prerequisites, Math. 11 f, 12 f, 14 s, 15 s. Required of sophomores in Electrical and Mechanical Engineering.

A brief course in the use of the tape, compass, level, transit, and stadia. Computations for area, coördinates, volume, and plotting.

SURV. 2 y. *Plane Surveying* (5)—Two lectures, one laboratory first semester; one lecture, one laboratory second semester. Prerequisites, Math. 11 f, 12 f, 14 s, 15 s. Required of sophomores in Civil Engineering.

Theory of and practice in the use of the tape, compass, transit, and level. General survey methods, traversing, area, coördinates, profiles, cross-sections, volume, stadia, latitude, longitude, azimuth, time. (Given commencing 1937-1938.)

SURV. 3 y. *Plane Surveying* (4)—One lecture, one laboratory. Prerequisites, Math. 11 f, 12 f, 14 s, 15 s. Required of sophomores in Civil Engineering.

Land surveying and map making for topography and planning. Practice in stadia. Computations of coördinates. Plotting of control and detail. Establishment of line and grade for construction purposes. Laying out simple curves. Estimates of earthwork.

SURV. 101 f. *Advanced Surveying* (3)—One lecture, two laboratories. Prerequisite, Surv. 3 y. Required of juniors in Civil Engineering.

Adjustment of instruments, triangulation, precise leveling, geodetic surveying, together with the necessary adjustments and computations. Topographic surveys. Plane table, land surveys, and boundaries. Mine, tunnel, and hydrographic surveys. (Pyle.)

ENGLISH LANGUAGE AND LITERATURE

PROFESSORS HOUSE, HALE, WARFEL;

ASSOCIATE PROFESSOR HARMAN; ASSISTANT PROFESSORS LEMON,

FITZHUGH; *MR. MURPHY, MR. COOLEY, MR. SIXBEY,

MISS IDE, MISS BLITCH.

ENG. 1 y. *Survey and Composition I* (6)—Three lectures. Freshman year. Prerequisite, three units of high school English and successful passing of the qualifying examination given by the Department, or successful completion of English A. Required of all four-year students.

A study of style, syntax, spelling, and punctuation, combined with an historical study of the literature of the 19th Century. Written themes, book reviews, and exercises.

ENG. A f. *Special Preparatory Course* (0)—Three lectures. Freshman year. Prerequisite, three units of high school English. Required of all students who fail to pass the qualifying examination. Students who show sufficient progress after five weeks of English A will be transferred to English 1 y. Others will continue with English A for one semester. The department reserves the right to transfer students who make unsatisfactory progress from English 1 y to English A f.

A course in grammatical and rhetorical principles designed to help students whose preparation has been insufficient for English 1 y. Exercises, conferences, precis writing.

ENG. 2 f. *Survey and Composition II* (3)—One general lecture given by various members of the department, two quiz sections. Sophomore year. Prerequisite, Eng. 1 y. Required of all students in the College of Arts and Sciences.

A continuation of work in composition based on the work accomplished in Eng. 1 y. An historical study of English literature from the beginnings to the 19th Century. Themes, book reports, conferences.

(*Absent on leave, 1936-1937.)

ENG. 3 s. *Survey and Composition II* (3)—One lecture, two quiz sections. Prerequisites, Eng. 1 y and Eng. 2 f. Continuation of Eng. 2 f.

ENG. 4 f or s. *Business English* (2)—Two lectures. Prerequisite, Eng. 1 y. Course complete in one semester, but may be taken in either semester.

This course develops the best methods of effective expression, both oral and written, used in business activities.

ENG. 5 f. *Expository Writing* (2)—Two lectures. Prerequisite, Eng. 1 y.

Study of the principles of exposition. Analysis and interpretation of material bearing upon scientific matter. Themes, papers, and reports.

ENG. 6 s. *Expository Writing* (2)—Two lectures. Prerequisite, Eng. 5 f. Continuation of Eng. 5 f.

ENG. 7 f. *Survey of American Literature* (3)—Three lectures. Prerequisite, Eng. 1 y.

American thought and expression from 1607 to 1865, with emphasis upon colonial cultural patterns, upon the rise of nationalism, and upon sectional conflict. Reports and term paper.

ENG. 8 s. *Survey of American Literature* (3)—Three lectures. Prerequisite, Eng. 1 y.

Continuation of Eng. 7 f, with emphasis upon the changing social forces which influenced American writers after 1865. Reports and term paper.

ENG. 9 f. *Minor Victorian Poets* (3)—Three lectures. Prerequisite, Eng. 1 y. Arnold, Clough, James Thompson, Swinburne, and others.

ENG. 10 s. *Modern Poets* (3)—Three lectures. Prerequisite, Eng. 1 y. Hardy, Noyes, Masefield, Brooke, Moody, Benet, and others.

ENG. 11 f. *Shakespeare* (3)—Three lectures. Prerequisite, Eng. 1 y. An intensive study of selected plays.

ENG. 12 s. *Shakespeare* (3)—Three lectures. Prerequisite, Eng. 1 y. Continuation of Eng. 11 f.

ENG. 13 s. *Introduction to Narrative Literature* (2)—Two lectures. Prerequisite, Eng. 1 y. Not open to freshmen.

An intensive study of representative stories, with lectures on the history and technique of the short story and of other narrative forms.

For Advanced Undergraduates and Graduates

ENG. 100 f and s. *Advanced Composition* (2)—Two lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s. Course complete in one semester, but may be taken a second semester for credit. Required of all students whose major is English. Open to others by permission of instructors.

Theory and practice in the larger forms, the types to be varied each semester at the election of the class. (Staff.)

*ENG. 101 f. *College Grammar* (3)—Three lectures. Prerequisite, Eng. 1 y. Required of students preparing to teach English, and an alternative requirement with Anglo-Saxon for others whose major is English.

Studies in the descriptive grammar of modern English. (Harman.)

*ENG. 102 s. *History of the English Language* (3)—Three lectures. Prerequisite, Eng. 101 f. Alternative requirement with Anglo-Saxon for students whose major is English.

An historical survey of the English language: its nature, origin, and development, with special stress upon structural and phonetic changes in English speech and upon the rules which govern modern usage. (Harman.)

*ENG. 103 y. *Anglo-Saxon* (6)—Three lectures. Prerequisite, Eng. 1 y. Alternative requirement with College Grammar and History of the English Language for students whose major is English.

A study of Anglo-Saxon (Old English) grammar and literature. Lectures on the principles of phonetics and comparative philology.

ENG. 104 y. *Chaucer and Other Poetry of the 14th Century* (4)—Two lectures. Prerequisite, Eng. 1 y and Eng. 2 f and 3 s.

A study of the principal poets and poems of England in the 14th Century, including Chaucer, Langland, *Gawaine and the Green Knight*, *The Pearl*, and early poems about Arthur. Chaucer and Langland will be read in the original; other works in modernized versions. (Not given in 1936-1937.)

(Hale.)

ENG. 105 f. *Medieval Drama in England* (3)—Three lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

A study of the development of medieval English drama from its beginning to 1540. Class discussion of significant plays, outside reading, reports. (Not given in 1936-1937.)

(Fitzhugh.)

ENG. 106 s. *Elizabethan Drama* (3)—Three lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

A study of the change in spirit and form of English drama from 1540 to 1640, as seen in the works of the important dramatists other than Shakespeare. Class discussion of significant plays, outside reading, reports. (Not given in 1936-1937.)

(Fitzhugh.)

ENG. 107 s. *Elizabethan Non-Dramatic Literature* (3)—Three lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

Survey of the non-dramatic poetry and prose from 1557 to 1600, with emphasis upon the sonnet cycle, the epic, and the beginnings of fiction.

(Warfel.)

*A student whose major is English is required to take Eng. 103 y, or Eng. 101 f and Eng. 102 s.

ENG. 108 f. *Milton* (2)—Two lectures. Prerequisites, Eng. 1 y and 2 f and 3 s.

A study of the poetry and the chief prose works. (Not given in 1936-1937.) (Murphy.)

ENG. 109 f. *Literature of the Seventeenth Century to 1660* (2)—Two lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

A study of the chief prose writers and of the Metaphysical and Cavalier traditions in poetry. (Not given in 1936-1937.) (Murphy.)

ENG. 110 s. *The Age of Dryden* (2)—Two lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

This course emphasizes the relation of literature to the philosophical movements of the age. (Not given in 1936-1937.) (Murphy.)

ENG. 111 f. *Literature of the Eighteenth Century* (2)—Two lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

Readings in the period dominated by Defoe, Swift, Addison, Steele, and Pope. (Fitzhugh.)

ENG. 112 s. *Literature of the Eighteenth Century* (2)—Two lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

A continuation of Eng. 111 f. Dr. Johnson and his Circle; the Rise of Romanticism; the Letter Writers. (Fitzhugh.)

*ENG. 113 f. *Prose and Poetry of the Romantic Age* (3)—Three lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

A study of the development of the Romantic movement in England as exemplified by the prose and poetry of Wordsworth, Coleridge, Lamb, De Quincey, Hazlitt, and others. (Hale.)

*ENG. 114 s. *Prose and Poetry of the Romantic Age* (3)—Three lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

A study of the late Romantic writers, including Byron, Shelley, Keats, Landor, Moore, Scott, and others. (Hale.)

ENG. 115 f. *Scottish Poetry* (2)—Two lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s. No knowledge of the Scottish dialect required.

Readings in the Scottish Chaucerians; Drummond of Hawthornden; song and ballad literature; poets of the vernacular revival: Ramsay, Ferguson, and Burns. Papers and reports. (Not given in 1936-1937.) (Fitzhugh.)

ENG. 116 f. *Tennyson* (2)—Two lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

Wide reading of the poems, with detailed study of *The Princess*. (House.)

ENG. 117 s. *Browning* (2)—Two lectures. Prerequisites, Eng 1 y and Eng. 2 f and 3 s.

Study of selections from Browning other than the dramas.

*Eng. 113 f and Eng. 114 s may be counted as Comparative Literature by students who have had Comp. Lit. 105 f and Comp. Lit. 106 s.

ENG. 118 s. *Victorian Prose* (3)—Three lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

A survey of trends of thought from about 1830, and analysis of the style of several writers. (Cooley.)

ENG. 119 f. *The Letter as a Literary Type* (2)—Two lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

Beginning with the Paston letters, the course is designed as a study of English and American letters, with special attention to use and changes in prose style. (Lemon.)

ENG. 120 f. *The Novel* (2)—Two lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

Lectures on the principles of narrative structure and style. Class reviews of selected novels, chiefly from English and American sources. (House.)

ENG. 121 s. *The Novel* (2)—Two lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

Continuation of Eng. 120 f.

ENG. 122 f. *English and American Essays* (2)—Two lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

A study of the philosophical, critical, and familiar essays of England and America. Bacon, Lamb, Macaulay, Emerson, Chesterton, and others. (House.)

ENG. 123 f. *Modern Drama* (3)—Three lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

A survey of English drama during the two centuries from 1660 to 1860. Class discussion of significant plays, outside reading, reports. (Fitzhugh.)

ENG. 124 s. *Contemporary Drama* (3)—Three lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

A study of significant European and American dramatists from Ibsen to O'Neill. Class discussion of significant plays, outside reading, reports. (Fitzhugh.)

ENG. 125 f. *Emerson and American Transcendentalism* (3)—Three lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

Study of the writings of the Concord group: Emerson, Thoreau, Hawthorne, Parker, Alcott, and Margaret Fuller. (Not given in 1936-1937.) (Warfel.)

ENG. 126 s. *Whitman, Twain, and the Rise of Realism* (3)—Three lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

Intensive study of the writings of Whitman, Twain, the local colorists, and the early realists. (Not given in 1936-1937.) (Warfel.)

ENG. 127 f. *Contemporary American Poetry and Prose* (3)—Three lectures. Prerequisites, Eng. 1 y and Eng. 2 f and 3 s.

Tendencies and forms in non-dramatic literature since 1920. (Warfel.)

ENG. 128 s. *Engineering Report Writing* (1)—One lecture. Prerequisite, Eng. 1 y. Required of juniors in Civil Engineering.

Content and form of engineering reports; collection, assembly, and interpretation of data; preparation of papers, letters, and reports. (Lemon.)

For Graduates

ENG. 201. *Research* (2-4). Credit proportioned to the amount of work and ends accomplished.

Original research and the preparation of dissertations looking towards advanced degrees. (Staff.)

ENG. 202 y. *Beowulf* (4)—Two lectures. Prerequisite, Eng. 103 y.

Critical study of grammar and versification, with some account of the legendary lore. (Not given in 1936-1937.) (Harman.)

ENG. 203 f. *Middle English* (2)—Two lectures. Prerequisite, Eng. 103 y.

A study of readings of the Middle English period, with reference to etymology and syntax. (House.)

ENG. 204 s. *Gothic* (2)—Two lectures. Prerequisite, Eng. 103 y.

A study of the forms and syntax, with readings from the *Ulfilas Bible*. Correlation of Gothic speech sounds with those of Old English. (House.)

ENG. 205 s. *Browning's Dramas* (2)—Two lectures.

Luria, The Return of the Druses, Pippa Passes, Colombe's Birthday, A Blot in the 'Scutcheon, and others. (House.)

ENG. 206 f. *Shakespeare Seminar* (2)—Two lectures. Prerequisites, Eng. 11 f and Eng. 12 s.

A survey of Shakespeare's complete works, with special attention to major problems in Shakespeare. (Harman.)

ENG. 207 y. *Medieval Romance in England* (4)—Two lectures.

Lectures and readings in the cyclical and non-cyclical romances in Medieval England, and their sources, including translations from the Old French. (Hale.)

ENG. 208 f. *Seminar in Eighteenth Century Literature* (2)—Two lectures.

Intensive study of one man's work or of one important movement of the century. (Not given in 1936-1937.) (Fitzhugh.)

ENG. 209 y. *Seminar in American Literature* (4)—Two lectures.

Critical and biographical problems in nineteenth-century American literature. (Warfel.)

ENG. 210 y. *Seminar in the Romantic Period* (4)—Two lectures. Prerequisites, Eng. 115 f and Eng. 116 s or an equivalent satisfactory to the instructor.

One discussion period of two hours.

Special studies of problems or persons associated with the Romantic movement. The subject-matter of the course will vary with the interests of the class. (Hale.)

ENTOMOLOGY

PROFESSOR CORY; ASSISTANT PROFESSOR KNIGHT; *
LECTURERS SNODGRASS, YAEGER, HYSLOP; MR. ABRAMS,
DR. DITMAN, MR. HARNES.

ENT. 1 f or s. *Introductory Entomology* (3)—Two lectures; one laboratory. Prerequisite, Zool. 1 f or s.

The relations of insects to the daily life and activities of the student. General principles of structural and systematic entomology. Field work and the preparation of a collection of insects.

ENT. 2 y. *Insect Morphology and Taxonomy* (6)—A two-semester course. Two laboratories. Credit not given for second semester alone. Prerequisite, Ent. 1 f or s.

Studies of the anatomy, physiology, and taxonomy of insects. A fundamental course given in preparation for most of the advanced courses. Lectures given at opportune times during laboratory periods.

ENT. 3 s. *Insect Biology* (3)—Two lectures; one laboratory. Prerequisite, Ent. 1 f or s.

A continuation of general entomological problems begun in the first course, with particular emphasis on the adaptations, ecology, interrelations, and behavior of insects.

ENT. 4 f or s. *Special Problems*—Prerequisite—consult department.

The intensive investigation of some entomological subject. A report of the results is submitted as part of the requirement for graduation.

ENT. 5 s. *Insecticides and Their Application* (1)—One laboratory. Prerequisite, Ent. 1 f or s.

The principles of insecticides, their chemistry, preparation, and application; construction, care, and use of spray and dusting machinery; fumigation; methods and apparatus in mechanical control. (Not offered in 1936-1937.)

ENT. 6 f. *Apiculture* (3)—Two lectures; one laboratory. Prerequisites, Zool. 1 f or s, and Ent. 1 f or s.

A study of the life history, yearly cycle, behavior, and activities of the honeybee. The value of honeybees as pollenizers of economic plants and as

producers of honey and wax. Designed to be of value to the student of agriculture, horticulture, entomology, and zoology.

ENT. 7 s. *Apiculture* (3)—Two lectures; one laboratory. Prerequisite, Ent. 6 f.

Theory and practice of apiary management. Designed for the student who wishes to keep bees or desires a knowledge of practical apiary management.

ENT. 8 y. *Entomological Technic and Scientific Delineation* (4). Prerequisite, Ent. 1 f or s.

Collecting, rearing, preserving, and mounting of insects. The preparation of exhibits, materials for instruction, entomological records. Methods of illustrating, including drawing, photography, lantern slide making, and projection. Useful for prospective teachers of biology as well as for the entomological student. (Not offered in 1936-1937.)

For Advanced Undergraduates and Graduates

ENT. 101 y. *Economic Entomology* (4)—Two lectures.

An intensive study of the problems of applied entomology, including life history, ecology, behavior, distribution, parasitism, and control. (Cory.)

ENT. 102 y. *Economic Entomology* (4)—Two laboratories.

Expansion of Ent. 101 y to include laboratory and field work in economic entomology. (Not offered in 1936-1937.) (Cory.)

ENT. 103 y. *Seminar* (2).

Presentation of original work, book reviews, and abstracts of the more important literature. (Cory, Knight.)

ENT. 104 y. *Insect Pests of Special Groups* (6). Prerequisite, Ent. 1 f or s.

A study of the principal insects of one or more of the following groups, founded upon food preferences and habitat. The course is intended to give the general student a comprehensive view of the insects that are of importance in his major field of interest and detailed information to the student specializing in entomology.

Insect Pests of 1. Fruit. 2. Vegetables. 3. Flowers, both in the open and under glass. 4. Ornamentals and Shade Trees. 5. Forests. 6. Field Crops. 7. Stored Products. 8. Live Stock. 9. The Household. (Not offered in 1936-1937.) (Cory.)

ENT. 105 f. *Medical Entomology* (2)—Two lectures. Prerequisite, Ent. 1 f or s, and consent of instructor.

The relation of insects to diseases of man, directly and as carriers of pathogenic organisms. Control of pests of man. The fundamentals of parasitology. (Knight.)

ENT. 106 f or s. *Insect Taxonomy* (3)—Two lectures; one laboratory.

An advanced course dealing with the principles and practices underlying modern systematic entomology.

Note: Course 106 runs from November 15 to March 15 to accommodate field workers. (Hyslop.)

ENT. 107 s. *Theory of Insecticides* (2)—Two lectures.

The development and use of contact and stomach poisons, with regard to their chemistry, toxic action, compatability, and foliage injury. Recent work with insecticides will be especially emphasized. (Ditman.)

For Graduates

ENT. 201 y. *Advanced Entomology* (1-3)—One lecture; one laboratory by arrangement.

Studies of minor problems in morphology, taxonomy, and applied entomology, with particular reference to preparation for individual research. (Cory.)

ENT. 202 y. *Research in Entomology* (6-10).

Advanced students having sufficient preparation, with the approval of the head of the department, may undertake supervised research in morphology, taxonomy, or biology and control of insects. Frequently the student may be allowed to work on Station or State Horticultural Department projects. The student's work may form a part of the final report on the project and be published in bulletin form. A dissertation suitable for publication must be submitted at the close of the studies as a part of the requirements for an advanced degree. (Cory.)

ENT. 203. *Insect Morphology* (2-4)—Two lectures, and laboratory work by special arrangement, to suit individual needs.

Insect anatomy with special relation to function. Given particularly in preparation for work in physiology and other advanced studies. (Snodgrass.)

Note: Course 203 begins November 15 and closes March 15, and is taught at 4:30 P. M. in order to accommodate field workers.

ENT. 204 y. *Economic Entomology* (6)—Three lectures. Studies of the principles underlying applied entomology, and the most significant advances in all phases of entomology. (Cory.)

ENT. 205 f. *Insect Physiology* (2)—Two lectures; occasional demonstrations. Enrollment subject to consent of instructor.

A study of the insect from the standpoint of the functioning of various of its cells, tissues, and organs, especially with regard to blood, circulation, digestion, absorption, excretion, respiration, nervous system, reflex action, metabolism, and secretion. (Yaeger.)

FARM FORESTRY

PROFESSOR BESLEY.

FOR. 1 s. *Farm Forestry* (3)—Two lectures; one laboratory. Alternate year course. Junior and senior years. Prerequisite, Bot. 101 f.

A study of the principles and practices involved in managing woodlands on the farm. The course covers briefly the identification of trees; forest protection; management, measurement, and utilization of forest crops; nursery practice; and tree planting. The work is conducted by means of lectures and practice in the woods.

FARM MANAGEMENT

PROFESSOR W. T. L. TALIAFERRO.

F. M. 1 s. *Farm Accounting* (3)—Two lectures; one laboratory. Open to juniors and seniors.

A concise practical course in the keeping of farm accounts and in determining the cost of farm production.

F. M. 2 f. *Farm Management* (4)—Four lectures.

The business of farming from the standpoint of the individual farmer. This course aims to connect the principles and practice which the student has acquired in the several technical courses and to apply them to the development of a successful farm business.

See also Agricultural Economics, page 192.

FARM MECHANICS

PROFESSOR CARPENTER.

F. MECH. 101 f. *Farm Machinery* (3)—Two lectures; one laboratory.

A study of the design and adjustments of modern horse- and tractor-drawn machinery. Laboratory work consists of detailed study of actual machines, their calibration, adjustment, and repair.

F. MECH. 102 s. *Gas Engines, Tractors, and Automobiles* (3)—Two lectures; one laboratory.

A study of the design, operation, and repair of the various types of internal combustion engines used in farm practice.

F. MECH. 104 f. *Farm Shop Work* (1)—One laboratory.

A study of practical farm shop exercises, offered primarily for prospective teachers of vocational agriculture.

F. MECH. 105 f. *Farm Buildings* (2)—Two lectures.

A study of all types of farm structures; also of farm heating, lighting, water supply, and sanitation systems.

F. MECH. 107 s. *Farm Drainage* (2)—One lecture; one laboratory.

A study of farm drainage systems, including theory of tile under-drainage, the depth and spacing of laterals, calculation of grades, and methods of construction. A smaller amount of time will be spent upon drainage by open ditches, and the laws relating thereto.

GENETICS AND STATISTICS

PROFESSOR KEMP.

GEN. 101 f. *Genetics* (3)—Three lectures.

A general course designed to give an insight into the principles of genetics, or of heredity, and also to prepare students for later courses in the breeding of animals or of crops.

GEN. 102 s. *Advanced Genetics* (2)—Two lectures. Prerequisite, Gen. 101 f. Alternate year course.

A consideration of chromosome irregularities and other mutations, interspecies crosses, identity of the gene, genetic equilibrium, and the results of attempts to modify germplasm.

GEN. 111 f. *Statistics* (2)—Two lectures.

A study of the collection, analysis, interpretation, and presentation of statistics. The course includes a study of expressions of type, variability, correlation, and significance of differences.

GEN. 112 s. *Advanced Statistics* (2)—Two lectures. Prerequisite, Gen. 111 f or its equivalent.

A study of the theory of error, measures of relationship, multiple and partial correlation, predictive formulas, curve fitting, and analysis of variance.

GEN. 114 s. *Elements of Statistics* (3)—Three lectures. Required of students in Business Administration.

A study of the fundamental principles used in statistical investigation.

GEN. 201 y. *Plant Breeding*—Credit according to work done.

GEN. 209 y. *Research*—Credit according to work done.

GEOLOGY

PROFESSOR BRUCE.

GEOL. 1 f. *Geology* (3)—Two lectures; one laboratory.

A textbook, lecture, and laboratory course, dealing with the principles of geology and their application to agriculture. While this course is designed primarily for agriculture students in preparation for technical courses, it may also be taken as part of a liberal education.

GREEK

PROFESSOR SPENCE.

GREEK 1 y. *Elementary Greek* (6)—Three lectures.

Drill and practice in the fundamentals of Greek grammar and the acquisition of a vocabulary, with translation of simple prose.

GREEK 2 y. *Greek Grammar, Composition, and Translation of Selected Prose Work* (8)—Four lectures. Prerequisite, Greek 1 y or two entrance units in Greek.

HISTORY

PROFESSOR CROTHERS; MR. THATCHER, MR. VOLLBRECHT, MR. MURPHY, MR. SILVER, MISS MORRIS.

H. 1 y. *General European History* (6)—Two lectures and one discussion a week.

A general course in European History, covering the important institutions of the Middle Ages and the main events and movements in Modern History.

H. 2 y. *American History* (6)—Two lectures and one discussion section. Open to sophomores.

An introductory course in American History from the discovery of the New World to the present time.

H. 3 y. *History of England and Greater Britain* (6)—Two lectures and one discussion covering the lectures and assignments.

A survey course of English History from earliest times to the World War.

H. 5 f. *Ancient History* (2)—Two lectures.

A general survey course—the Near East, Greece and Rome.

H. 6 s. *Ancient History* (2)—Two lectures.

A continuation of H. 5 f.

For Advanced Undergraduates and Graduates

H. 101 y. *American Colonial History* (6)—Three lectures. Prerequisite, H. 2 y.

A study of the political, economic, and social development of the American people from the discovery of America through the formation of the Constitution. (Crothers.)

H. 102 y. *Recent American History* (6)—Three lectures. Prerequisite, H. 2 y.

The history of national development from the close of the Civil War to the present time. (Thatcher.)

H. 104 f. *Social and Economic History of the United States* (3)—Three lectures. Prerequisite, H. 2 y.

An advanced course, giving a synthesis of American life from 1607 to 1790. (Crothers.)

H. 105 s. *Social and Economic History of the United States* (3)—Three lectures. Prerequisite, H. 2 y.

This course is similar to H. 104 f., and covers the period from 1790 to 1860. (Crothers.)

H. 106 f. *Diplomatic History of the United States* (2)—Two lectures. Prerequisite, H. 2 y.

A study of American foreign policy. (Thatcher.)

H. 107 s. *Diplomatic History of the United States* (2)—Two lectures. Prerequisite, H. 2 y.

This course is a continuation of H. 106 f. (Thatcher.)

H. 108 f. *Constitutional History of the United States* (3)—Three lectures. Prerequisite, H. 2 y.

A study of the historical forces resulting in the formation of the Constitution, and of the development of American constitutionalism in theory and practice thereafter. (Thatcher.)

H. 109 s. *Constitutional History of the United States* (3)—Three lectures. Prerequisite, H. 2 y.

A continuation of H. 108 f. (Thatcher.)

H. 110 f. *History of the United States, 1789-1865* (2)—Two lectures. Prerequisite, H. 2 y.

The history of national development to the end of the Civil War. (Thatcher.)

H. 111 s. *History of the United States, 1789-1865* (2)—Two lectures. Prerequisite, H. 2 y.

This course is a continuation of H. 110 f. (Thatcher.)

H. 115 y. *Mediaeval Civilization* (4) — Two lectures. Prerequisite, H. 1 y.

The cultural, institutional, economic, and political development of Europe from the decline of the Roman Empire to the opening of the Fourteenth Century. (Vollbrecht.)

H. 117 f. *Renaissance and Reformation* (2)—Two lectures. Prerequisite, H. 1 y.

A detailed study of movements and leaders as vital factors in the transition from mediaeval to modern times. (Vollbrecht.)

H. 118 s. *Renaissance and Reformation* (2)—Two lectures. Prerequisite, H. 1 y.

This course is a continuation of H. 117 f. (Vollbrecht.)

H. 119 f. *Revolutionary and Napoleonic Europe* (2)—Two lectures. Prerequisite, H. 1 y.

The course deals with the French Revolution and the relations of Revolutionary France with the rest of Europe. (Silver.)

H. 120 s. *Revolutionary and Napoleonic Europe* (2)—Two lectures, Prerequisite, H. 1 y.

This course is a continuation of H. 119 f. (Silver.)

H. 121 f. *Expansion of Europe* (3)—Three lectures. Prerequisite, H 1 y.

A treatment of European History from the Crusades to the present, emphasizing especially the expansion of national states. (Silver.)

H. 122 s. *Expansion of Europe* (3)—Three lectures. Prerequisite, H 1 y.

This course is a continuation of H. 121 f. (Silver.)

H. 123 f. *Diplomatic History of Europe since 1871* (3)—Three lectures. Prerequisite, H. 1 y.

A study of European alliances and alignments. World politics and imperialism in the pre-World War period, and developments since the World War. (Not given in 1936-1937.) (Vollbrecht.)

H. 124 s. *Diplomatic History of Europe since 1871* (3) — Three lectures. Prerequisite, H. 1 y.

This course is a continuation of H.123 f. (Not given in 1936-1937.) (Vollbrecht.)

H. 125 f. *Constitutional History of England* (3)—Three lectures. Prerequisite, H. 1 y or H. 3 y.

This course traces the historical development of English political institutions. (Silver.)

H. 126 s. *Constitutional History of England* (3)—Three lectures. Prerequisite, H. 1 y or H. 3 y.

This course is a continuation of H. 125 f. (Silver.)

H. 127 f. *Europe since 1815* (3)—Three lectures and assignments. Prerequisite, H 1 y.

An intensive course in European History from 1815 to the present time. (Vollbrecht.)

H. 128 s. *Europe since 1815* (3)—Three lectures and assignments. Prerequisite, H. 1 y.

This course is a continuation of H. 127 f. (Vollbrecht.)

For Graduates

H. 200 y. *Research* (2-4)—Credit proportioned to the amount of work. (Staff.)

H. 201 y. *Seminar in American History* (4)—Conferences and reports on related topics. (Crothers.)

H. 202 y. *Bibliography and Historical Criticism* (4). (Staff.)

HOME ECONOMICS

PROFESSORS MOUNT, MCFARLAND, WELSH; ASSOCIATE PROFESSOR MURPHY; ASSISTANT PROFESSOR WESTNEY; MRS. ENGLUND.

Textiles and Clothing

H. E. 11 f. *Textiles and Clothing* (3)—Two recitations; one laboratory. History of textile fibers; budgeting; care of clothing; construction of one garment of wool and one of silk. (Westney.)

H. E. 12 s. *Textiles and Clothing* (3)—One recitation; two laboratories. Standardization and identification of textile fibers and materials. Construction of tailored suit; application of construction methods used by the trade. (Westney.)

For Advanced Undergraduates

H. E. 111 f. *Advanced Clothing* (3)—Three laboratories. Prerequisites, H. E. 11 f and H. E. 12 s or equivalent.

The principles governing modeling and draping of garments; specific applications in paper and materials. (Westney.)

H. E. 112 s. *Special Clothing Problems* (3)—One recitation; two laboratories. Prerequisite, H. E. 111 f.

Each student selects and develops three individual clothing problems. (Westney.)

H. E. 113 f. *Problems and Practice in Textiles, Clothing, or Related Art.* (4).

Investigations pertaining to subjects in textiles, clothing, or related art. (McFarland.)

H. E. 114 f or s. *Advanced Textiles* (3)—Two recitations; one laboratory.

Advanced study of textiles; historic textiles; the textile industry as it affects the consumer; eight trips to museums and stores. (Westney.)

FOODS AND NUTRITION

H. E. 31 y. *Foods* (6)—One recitation; two laboratories. Prerequisite, Chem. 1 y.

Principles of food preparation; composition of foods; planning and serving of meals. (Welsh, Englund, and Riedel.)

For Advanced Undergraduates

*H. E. 131 f or s. *Nutrition* (3)—Three recitations. Prerequisites, H. E. 31 y and Chem. 12 f.

Nutritive value, digestion and assimilation of foods. (Welsh.)

* H. E. 131 f is repeated in the second semester as H. E. 131 s, for Pre-Nursing students.

H. E. 132 s. *Nutrition* (3)—Three recitations. Prerequisite, H. E. 131 f. Selection of food to promote health; diet in disease. (Welsh.)

H. E. 133 f. *Demonstrations* (2)—Two laboratories. Practice in demonstrations. (Welsh.)

H. E. 134 s. *Advanced Foods* (3)—One recitation; two laboratories. Prerequisite, H. E. 31 y. Advanced study of manipulation of food materials. (Welsh.)

H. E. 135 f. *Problems and Practice in Foods* (4). Experimental foods. (Welsh, Englund.)

H. E. 136 s. *Child Nutrition* (2)—Two recitations. Lectures and discussions relating to the principles of child nutrition.

For Graduates

H. E. 201 f or s. *Seminar in Nutrition* (3).

Oral and written reports on assigned readings in the current literature of Nutrition. Preparation and presentation of reports on special topics.

H. E. 202 f or s. *Research*. Credit to be determined by amount and quality of work done.

With the approval of the head of the department, the student may pursue an original investigation in some phase of foods. The result may form the basis of a thesis for an advanced degree.

H. E. 203 f or s. *Advanced Experimental Foods* (3)—One recitation; two laboratories. Experimental work with foods.

ART

H. E. 21 s. *Design* (3)—One recitation; two laboratories.

Elements of design; application of design principles to daily living; practice in designing. (McFarland.)

H. E. 22 s. *Still Life* (1)—One laboratory. Prerequisite, H. E. 21 f. Work in charcoal and color. (McFarland.)

H. E. 23 s. *Figure Sketching* (1)—One laboratory. Alternates with Still Life (H. E. 22 s.) (McFarland.)

H. E. 24 f. *Costume Design* (3)—One recitation; two laboratories. Prerequisite, H. E. 21 f.

A study of fundamentals underlying taste, fashion, and design as they relate to the expression of individuality in dress. (McFarland.)

For Advanced Undergraduates

H. E. 121 y. *History of Architecture and Interior Decoration* (6)—Two recitations; one laboratory. Prerequisite, H. E. 21 f.

Study of historic styles of architecture and period furniture: their adaptation and use in modern architecture and furniture.

Historic designs of rugs, tapestries, draperies, etc.: their use in interior decoration and influence upon modern textile design. Application of the principles of design, line-proportion, etc., color, harmony, balance, rhythm, emphasis, to interior decoration. (Murphy.)

H. E. 122 s. *Applied Art* (1)—One laboratory.

Application of the principles of design and color to practical problems. (Murphy.)

H. E. 123 s. *Advanced Design* (3)—Three laboratories. Prerequisites, H. E. 24 s and 21 f.

Advanced study in design, with application to particular problems. (McFarland.)

Home and Institution Management

H. E. 141 f. *Management of the Home* (3)—Two lectures; one laboratory.

Study and discussion of household organization and management; time and money budgets; house construction and planning; selection, operation, and care of equipment; selection and care of household furnishings, with a view to providing well-being and satisfaction for the members of the family.

H. E. 142 s. *Management of the Home* (3)—Two lectures; one laboratory.

The family, its history; discussion of questions and problems of the family in relation to changing social and economic conditions.

H. E. 143 f. *Practice in Management of the Home* (4).

Experience in operating and managing a household composed of a member of the faculty and a small group of students for approximately one-third of a semester. (Murphy.)

H. E. 144 y. *Institution Management* (6)—Three recitations.

The organization and management of food service in hospitals, clubs, schools, cafeterias, and restaurants; management of room service in dormitories; organization of institution laundries.

H. E. 145 f. *Practice in Institution Management* (4)—Prerequisite, H. E. 144 y.

Practice work in one of the following: the University dining hall, a tea room, hospital, cafeteria, or hotel.

H. E. 146 s. *Advanced Institution Management* (3)—Prerequisite, H. E. 144 y. One recitation weekly and individual conferences with the instructor.

Special problems in institution management.

Home Economics Extension

H. E. 151 s. *Methods in Home Economics Extension* (3)—Given under the direction of Miss Venia Kellar and specialists.

H. E. 152 f. *Field Practice in Home Economics Extension* (4)—Given under the direction of Miss Venia Kellar, State Home Demonstration Agent. Should be taken during the summer vacation.

Home Economics Seminar

H. E. 161 s. *Seminar* (3)—Three recitations.

Book reviews, and abstracts from scientific papers and bulletins relating to home economics, together with criticisms and discussions of the work presented. (Murphy and Staff.)

HORTICULTURE

PROFESSORS SCHRADER, THURSTON; ASSOCIATE PROFESSORS WENTWORTH, CORDNER, FRAZIER, HAUT, LINCOLN.

A. Pomology

HORT. 1 f. *Elementary Pomology* (3)—Three lectures.

A general course in pomology. The proper location and site for an orchard; varieties, planting plans, pollination requirements, inter-crops, spraying, cultural methods, fertilizing methods, thinning, picking, spray residue removal, packing, and marketing are given consideration. These subjects are discussed for apples, peaches, pears, plums, cherries, and quinces. The principles of plant propagation as applied to pomology are also discussed.

HORT. 4 s. *Small Fruit Culture* (2)—Two lectures. Given in alternate years.

The care and management of small fruit plantations. Varieties and their adaptation to Maryland soils and climate, packing, marketing, and a study of the experimental plots and varieties on the Station grounds. The following fruits are discussed: the grape, strawberry, blackberry, blackcap raspberry, red raspberry, currant, gooseberry, dewberry, loganberry, and blueberry. (Not offered in 1937-1938.)

HORT. 5 f. *Fruit Judging* (2)—Two laboratories.

A course designed to train students for fruit-judging teams and practical judging. Students are required to know at least one hundred varieties of fruit, and are given practice in judging single plates, largest and best collections, boxes, barrels, and commercial exhibits of fruits. Students are required to help set up the college horticultural show each year.

HORT. 6 f. *Advanced Fruit Judging* (1)—One laboratory.

HORT. 7 f. *Practical Pomology Laboratory* (2)—Two laboratories. Prerequisite, Hort. 1 f or taken in conjunction with Hort. 1 f. Seasonal practical experience in carrying out orchard and small fruit operations, in-

cluding spraying, harvesting, spray residue removal, grading, packing, mouse and borer control, pruning, budding, grafting, planting, pollination, etc.

The course will include trips to the principal horticultural regions of Maryland and of neighboring states, and to nurseries or other points of interest.

HORT. 8 s. *Practical Pomology Laboratory* (2)—Two laboratories. Prerequisite, Hort. 1 f.

A continuation of Hort. 7 f as above outlined.

B. Vegetable Crops

HORT. 11 s. *Principles of Vegetable Culture* (3) — Two lectures; one laboratory.

A study of the fundamental principles underlying all garden practices. The laboratory work is organized from the point of view of the home garden. Special studies are made of vegetable seed identification, methods of growing plants, garden planning, pest control, etc. Each student is given a small garden to fertilize, plant, cultivate, spray, etc.

HORT. 12 f. *Truck Crop Production* (3)—Three lectures. Prerequisite, Hort. 11 s.

A study of methods used in commercial vegetable production. Each crop is discussed in detail. Trips are made to large commercial gardens, various markets, and other places of interest.

HORT. 13 s. *Vegetable Forcing* (3)—Two lectures; one laboratory. Prerequisite, Hort. 11 s.

All vegetables used for forcing are considered. Laboratory work in sterilization and preparation of soils, cultivation, regulation of temperature and humidity, watering, training, pruning, pollination, harvesting, and packing. Given in alternate years. (Not offered in 1937-1938.)

C. Floriculture

HORT. 21 f. *General Floriculture* (2)—One lecture; one laboratory.

The management of greenhouses; the production and marketing of florists' crops; retail methods; plants for house and garden. Given in alternate years. (Not offered in 1936-1937.)

HORT. 22 y. *Greenhouse Management* (6)—Two lectures; one laboratory.

A consideration of the methods employed in the management of greenhouses, including the operations of potting, watering, ventilating, fumigation, and methods of propagation. Given in alternate years. (Not offered in 1937-1938.)

HORT. 23 y. *Floricultural Practice* (4)—Two laboratories.

Practical experience in the various greenhouse operations of the fall, winter, and spring seasons.

HORT. 24 s. *Greenhouse Construction* (2)—One lecture; one laboratory. The various types of houses; their location, arrangement, construction, and cost; principles and methods of heating; preparation of plans and specifications for commercial and private ranges. Given in alternate years. (Not offered in 1937-1938.)

HORT. 25 y. *Commercial Floriculture* (6)—Two lectures; one laboratory. Prerequisite, Hort. 22 y.

Cultural methods of florists' bench crops and potted plants, the marketing of the cut flowers, the retail store, a study of floral decoration. Given in alternate years. (Not offered in 1936-1937.)

HORT. 26 f. *Garden Flowers* (3)—Two lectures; one laboratory.

Plants for garden use; the various species of annuals, herbaceous perennials, bulbs, bedding plants, and roses and their cultural requirements. Given in alternate years. (Not offered in 1937-1938.)

HORT. 27 s. *Floricultural Trip* (1)—Prerequisite, Hort. 22 y.

A trip occupying one week's time will be made through the principal floricultural sections, including Philadelphia and New York, visiting greenhouse establishments, wholesale markets, retail stores, nurseries, etc. The cost of this trip should not exceed thirty dollars to each student. Each student will be required to hand in a detailed report covering the trip. The time for taking this trip will be arranged yearly with each class.

D. Landscape Gardening

HORT. 31 s. *General Landscape Gardening* (2)—Two lectures.

The theory and general principles of landscape gardening and their application to private and public areas. Special consideration is given to the improvement and beautification of the home grounds, farmsteads, and small suburban properties. Adapted to students not intending to specialize in landscape, but who wish some theoretical and practical knowledge of the subject. Given in alternate years. (Not offered in 1936-1937.)

HORT. 32 f. *Elements of Landscape Design* (3)—One lecture; two laboratories. Prerequisite, Hort. 31 s.

A consideration of the principles of landscape design; surveys, mapping, and field work. Given in alternate years. (Not offered in 1936-1937.)

HORT. 33 s. *Landscape Design* (3)—Three laboratories. Prerequisite, Hort. 32 f.

The design of private grounds and gardens and of architectural details used in landscape; planting plans; analytical study of plans of practicing landscape architects; field observation of landscape developments. Given in alternate years. (Not offered in 1937-1938.)

HORT. 34 f. *Landscape Design* (3)—Three laboratories. Prerequisite, Hort. 33 s.

Continuation of course as outlined above. Given in alternate years. (Not offered in 1936-1937.)

HORT. 35 f. *History of Landscape Gardening* (1)—One lecture. Prerequisite, Hort. 31 s.

Evolution and development of landscape gardening; the different styles, and a particular consideration of Italian, English, and American gardens. Given in alternate years. (Not offered in 1937-1938.)

HORT. 36 s. *Landscape Construction and Maintenance* (1)—One lecture or laboratory.

Methods of construction and planting; estimating; park and estate maintenance. Given in alternate years. (Not offered in 1937-1938.)

HORT. 37 s. *Civic Art* (2)—One lecture; one laboratory.

Principles of city planning and their application to village and rural improvement, including problems in design of civic center, parks, school grounds, and other public and semi-public areas. Given in alternate years. (Not offered in 1936-1937.)

E. General Horticulture Courses

HORT. 42 y. *Horticultural Research and Thesis* (4-6).

An advanced student in any of the four divisions of horticulture may select a special problem for investigation. This may be either the summarizing of all the available knowledge on a particular problem or the investigation of some new problem. Where original investigation is carried on, the student should in most cases start the work during the junior year. The results of the research are to be presented in the form of a thesis and filed in the horticultural library.

HORT. 43 y. *Horticultural Seminar* (2).

In this course papers are prepared by members of the class upon subjects pertaining to their research or thesis work or upon special problems assigned them. Discussions of special topics are given from time to time by members of the departmental staff.

For Advanced Undergraduates and Graduates

HORT. 101 f. *Commercial Fruit Growing* (3)—Two lectures; one laboratory. Prerequisite, Hort. 1 f.

The proper management of commercial orchards in Maryland. Advanced work is taken up on the subjects of culture, fertilization, pollination, pruning, thinning, spraying, spray removal, picking, packing, marketing, and storage of fruits. Given in alternate years. (Not offered in 1936-1937.) (Schrader.)

HORT. 102 f. *Economic Fruits of the World* (2)—Two lectures. Prerequisites, Hort. 1 f and Hort. 101 f.

A study is made of the botanical, ecological, and physiological characteristics of all species of fruit-bearing plants of economic importance, such as the date, pineapple, fig, olive, banana, nut-bearing trees, citrus fruits, and newly introduced fruits, with special reference to their cultural requirements in certain parts of the United States and the insular possessions. All fruits are discussed in this course which have not been discussed in a previous course. Given in alternate years. (Not offered in 1936-1937.) (Schrader.)

HORT. 103 f. *Tuber and Root Crops* (2)—One lecture; one laboratory. Prerequisites, Hort. 11 s and 12 f.

A study of white potatoes and sweet potatoes, considering seed, varieties, propagation, soils, fertilizers, planting, cultivation, spraying, harvesting, storing, and marketing. Given in alternate years. (Not offered in 1936-1937.) (Frazier.)

HORT. 104 s. *Advanced Truck Crop Production* (2)—Prerequisites, Hort. 11 s, 12 f, and 13 s.

A detailed study of some of the more important problems encountered in the commercial production of truck crops. A thorough study is made of recent literature pertaining to such problems as soil acidity, soil organic matter relationships, new developments in insect and disease control, plant production and transplanting, etc. (Cordner.)

HORT. 105 f. *Systematic Olericulture* (3)—Two lectures; one laboratory. Prerequisites, Hort. 11 s and 103 f.

A study of the classification and nomenclature of vegetable crops and the description and identification of varieties. The adaptation of varieties to different environmental conditions and their special uses in vegetable production. (Cordner.)

HORT. 106 y. *Plant Materials* (5)—One lecture; one or two laboratories.

A field and laboratory study of trees, shrubs, and vines used in ornamental planting. Given in alternate years. (Not offered in 1936-1937.) (Thurston.)

HORT. 107 f. *Systematic Pomology* (3)—Two lectures; one laboratory.

The history, botany, and classification of fruits and their adaptation to Maryland conditions. Exercises are given in describing and identifying the leading commercial varieties of fruits. Given in alternate years. (Not offered in 1937-1938.) (Wentworth.)

HORT. 108 f or s. *Advanced Practical Pomology*.

A trip of one week to the fruit regions of Maryland, Pennsylvania, Delaware, and Virginia, for the purpose of studying the commercial and experimental phases of the fruit industry. Before making the trip the students

will be required to make a study of the experimental work in progress at the Experiment Stations to be visited and to know the commercial aspects of the industry in the several states. A detailed report will be required after the trip. (Staff.)

For Graduates

HORT. 201 y. *Experimental Pomology* (6)—Three lectures.

A systematic study of the sources of knowledge and opinion as to practice in pomology; methods and difficulties in experimental work in pomology and results of experiments that have been or are being conducted in all experiment stations in this and other countries. (Schrader.)

HORT. 202 y. *Experimental Olericulture* (6)—Three lectures.

A systematic study of the sources of knowledge and opinion as to practice in vegetable growing; methods and difficulties in experimental work in vegetable production and results of experiments that have been or are being conducted in all experiment stations in this and other countries. (Cordner and Frazier.)

HORT. 203 s. *Experimental Floriculture* (2)—Two lectures.

A systematic study of the sources of knowledge and opinion as to practice in floriculture. The results of all experimental work in floriculture which has been or is being conducted is thoroughly discussed.

HORT. 204 s. *Methods of Research* (2)—One lecture; one laboratory.

Methods of conducting horticultural research are stressed, to familiarize the student with methods used and the technic involved. Laboratory and field measurements on projects are used to develop technical skill. Outlines of research problems and preparation of research publications are studied, as well as drill in methods of oral presentation of material. (Staff.)

HORT. 205 y. *Advanced Horticultural Research and Thesis* (4, 6, or 8). Students will be required to select problems for original research in pomology, vegetable gardening, floriculture, or landscape gardening. These problems will be continued until completed, and final results are to be published in the form of theses. (Staff.)

HORT. 206 y. *Advanced Horticultural Seminar* (2).

This course is required of all graduate students. Students are required to give reports either on special topics assigned them, or on the progress of their work being done in courses. Members of the departmental staff report special research from time to time. (Staff.)

Requirements of Graduate Students in Horticulture

Pomology—Graduate students specializing in Pomology who are planning to take advanced degrees will be required to take or offer the equivalent of the following courses: Hort. 1 f, 101 f, 102 f, 107 f, 201 y, 204 s, 205 y, 206 y,

and 207 y; Plant Biochemistry (Plt. Phys. 201 s); Plant Microchemistry (Plt. Phys. 203 s); Plant Biophysics (Plt. Phys. 202 f); Organic Chemistry (Chem. 8 y); Plant Anatomy (Bot. 101 f).

Olericulture—Graduate students specializing in vegetable gardening who are planning to take an advanced degree will be required to take or offer the equivalent of the following courses: Hort. 12 f, 13 s, 103 f, 105 f, 202 y, 204 s, 205 y, and 206 y; Plant Microchemistry (Plt. Phys. 203 s); Plant Biochemistry (Plt. Phys. 201 s); Plant Biophysics (Plt. Phys. 202 f); Organic Chemistry (Chem. 8 y); Plant Anatomy (Bot. 101 f).

Floriculture—Graduate students specializing in floriculture who are planning to take an advanced degree will be required to take or offer the equivalent of the following courses: Hort. 22 y, 23 y, 24 s, 25 y, 26 f, 203 s, 204 s, 205 y, and 206 y; Plant Biophysics (Plt. Phys. 202 f); Plant Biochemistry (Plt. Phys. 201 s); Organic Chemistry (Chem. 8 y); Plant Taxonomy (Bot. 103 f or s); Plant Anatomy (Bot. 101 f); Plant Ecology (Plant Phys. 101 s).

Landscape Gardening—Graduate students specializing in landscape gardening who are planning to take an advanced degree will be required to take or offer the equivalent of the following courses: Hort. 32 f, 33 s, 35 f, 105 f, 204 s, and 206 y; Plant Taxonomy (Bot. 103 f or s); Dr. 1 y and 2 y; Plane Surveying (Surv. 2 y); and Plant Ecology (Plt. Phys. 101 s).

Additional Requirements—In addition to the above required courses, some graduate students in horticulture are advised to take physical and colloidal chemistry.

Unless graduate students in Horticulture have had certain courses in entomology, plant pathology, genetics, and biometry, certain of these courses will be required.

Note: For courses in Biochemistry and Biophysics, see Plant Physiology, under Botany.

LATIN

MR. MURPHY.

LAT. 1 y. *Elementary Latin* (6)—Three lectures.

This course is offered to cover a substantial and accurate course in grammar and syntax, with translation of simple prose. It is substantially the equivalent of one entrance unit in Latin.

LAT. 2 y. (6)—Three lectures. Prerequisite, Lat. 1 y or one entrance unit in Latin.

Texts are selected from Virgil, with drill on prosody, and from Cicero.

LIBRARY SCIENCE

MISS BARNES, MR. FOGG.

L. S. 1 f or s. *Library Methods* (1)—Freshman year.

This course is intended to help students use the library with greater facility. Instruction is given by practical work with the various catalogues, indexes, and reference books. This course considers the general classification of the library according to the Dewey system. Representative works of each division are studied in combination with the use of the library catalogue. Attention is given to periodical literature, particularly that indexed in the Reader's Guide and in other periodical indexes; and to various much-used reference books, which the student will find helpful throughout the college course.

MATHEMATICS

PROFESSORS T. H. TALIAFERRO, DANTZIG, GWINNER; ASSOCIATE PROFESSOR SPANN; ASSISTANT PROFESSOR YATES; MR. ALRICH, DR. TOMPKINS, MR. VOLCKHAUSEN, MR. WILLIAMS, MISS ZIMMERMAN.

MATH. 7 f. *Solid Geometry* (2)—Two lectures. Prerequisite, plane geometry. College credit given only to students in the College of Education. Open without credit to students desiring to enter the College of Engineering who have had no opportunity to take the subject in high school.

Lines and planes; cylinders and cones; the sphere; polyhedra.

MATH. 8 f. *Introductory Algebra* (3)—Three lectures. Prerequisite, one year of high school algebra. Elective. Open without credit to students who are required to take Math. 11 f, but lack the requisite preparation for it.

Fundamental operations; linear and quadratic equations; exponents, logarithms, etc.

MATH. 9 f. *Introductory Trigonometry* (1)—One laboratory. Prerequisite to Math. 12 f. Students who have had an equivalent course in high school will have the privilege of entering Math. 12 f directly upon passing an aptitude test.

MATH. 10 s. *Plane Trigonometry* (3) — Three lectures. Prerequisite, plane geometry. Required of students in the College of Education who elect mathematics as their minor subject.

Trigonometric functions; fundamental identities; solution of plane triangles, and other applications to geometry and surveying.

MATH. 11 f. *College Algebra* (3)—Three lectures. Prerequisite, high school algebra completed and aptitude test. Required of all students in the College of Engineering; of students majoring in mathematics, physics, and chemistry; of students in the College of Education who elect mathematics as a major or minor subject.

Review of the fundamental concepts and operations, simultaneous equations; the binomial theorem; progressions; logarithms; permutations and combinations; numerical solutions of equations. This course will be repeated during the second semester.

MATH. 12 f. *Laboratory in Algebra and Trigonometry* (1)—One laboratory. Required of students majoring in mathematics or physics and of students in the College of Education who elect mathematics as their major subject; also, of all students in the College of Engineering. This course and Math. 11 f may be taken collaterally; if taken separately, the prerequisites are Math. 9 f and 11 f.

Supplementary topics in algebra and trigonometry; mathematical induction; determinants; complex numbers; theory of equation; De Moivre's theorem; trigonometric equations; elements of spherical trigonometry.

MATH. 14 s. *Analytic Geometry* (3) — Three lectures. Prerequisite, Math. 11 f. Required of all students in the College of Engineering; of students majoring in mathematics, physics, chemistry, biology; of pre-medical and pre-dental students; of students in the College of Education who elect mathematics as major or minor subject.

Principles of trigonometry; coördinates; metrical relations; the straight line, circle, parabola, ellipse, hyperbola; empirical equations; graphing of periodic functions; applications to the solution of equations.

MATH. 15 s. *Laboratory in Geometry* (1)—One laboratory. Required of all students majoring in mathematics or physics, and of students in the College of Education who elect mathematics as their major subject; also of all students in the College of Engineering. This course may be taken collaterally with Math. 1 s; if taken separately, the prerequisites are Math. 12 f and 14 s.

Supplementary topics from geometry and analytic geometry; transformation of coördinates; the general equation of the second degree; polar coördinates; elements of the theory of curves; classical curves, algebraic and transcendental; principles of solid analytic geometry.

MATH. 16 y. *Calculus* (6) — Three lectures. Prerequisite, Math. 14 s. Required of all students in the College of Engineering; of students majoring in mathematics, physics, or chemistry, of students in the College of Education who elect mathematics as their major or minor subject.

Derivative and differential, maxima and minima, applications to graphing, curvature; methods of integration; applications of the definite integral to calculations of areas, arcs, volumes, moments, etc.; elementary series.

MATH. 17 y. *Laboratory in Calculus* (2)—One laboratory. Required of students majoring in mathematics or physics; and of students in the College of Education who elect mathematics as their major subject; also of all students in the College of Engineering. This course and Math. 16 y may be taken collaterally; if taken separately, Math. 15 s and 16 y are prerequisite.

Supplementary topics in calculus; elements of the theory of functions; hyperbolic functions; advanced methods in maxima and minima problems; partial derivatives; advanced methods in integration; multiple integrals; Taylor series; integration in series; differential equations.

MATH. 18 y. *Geometrical Drawing and Modeling* (2)—One laboratory. Required of students who major in mathematics or physics, or in education with mathematics as their major subject.

Problems in geometrical construction, in projective geometry, in geometrical optics; mechanical generation of curves.

MATH. 19 y. *Advanced Geometrical Drawing and Modeling* (2) — One laboratory. Prerequisite, Math. 18 y. Required of students who major in mathematics or physics, or in education with mathematics as their major subject.

Elements of descriptive geometry; projections of skew curves and sections of surfaces; construction of models of space configurations.

MATH. 20 s. *Survey of Mathematics* (3) — Three lectures. Elective. Credit is given only to students who take no other college mathematics as required subject.

An orientation course, which aims at acquainting the student with the cultural aspects of mathematics. Technical details are avoided, and emphasis is laid on the fundamental ideas of mathematics as they evolved historically. The scope and validity of mathematical concepts and the applications of mathematics to science and industry are among the topics treated.

(Dantzig.)

For Advanced Undergraduates and Graduates

(Courses Math. 101 s, 111 s, 112 s, 114 f, 115 f, and 140 y are taught every year; all other courses are given on alternate years.)

MATH. 101 f. *Mathematical Theory of Investment* (3)—Three lectures. Prerequisite, Math. 11 f or 8 f. Open only to juniors and seniors. Required of all students in Business Administration.

Application of mathematics to financial transactions; compound interest and discount; construction and use of interest tables; sinking funds; annuities; depreciation, valuation, and amortization of securities; building and loan associations; life insurance, etc.

(Spann.)

MATH. 111 f. *Elementary Mathematics from an Advanced Standpoint* (2)—Two lectures.

A survey course in high school mathematics intended for workers in biological and social sciences, and for prospective teachers of mathematics and physics.

(Dantzig.)

MATH. 112 s. *College Mathematics* (2)—Two lectures. Prerequisite, Math. 111 f or 8 f, or equivalent high school courses.

A survey course of algebra, trigonometry, analytic geometry, and the calculus, intended for workers in the biological sciences and for prospective teachers of mathematics and physics. (Dantzig.)

MATH. 114 f. *Differential Equations for Engineers* (3)—Three lectures.

This course is conducted in close coöperation with the College of Engineering, and deals with aspects of mathematics which arise in engineering theory and practice. Among the topics treated are the following: linear differential equations; advanced methods in kinematics and dynamics; applications of analysis to electrical circuits, to aero-dynamics, bridge-design, etc. (Dantzig.)

MATH. 115 f. *Applied Calculus for Chemists* (3)—Three lectures.

Prerequisite, Math. 16 y. Required of students in Industrial Chemistry. Elective for others.

This course is conducted in close coöperation with the Chemistry Department, and deals with the aspects of mathematics which arise in the theory and practice of chemistry. Among the topics treated are the following: partial and total derivatives; applications of mathematical analysis to thermo-dynamics, to molecular and atomic phenomena, and to physical chemistry. (Tompkins.)

MATH. 121 s. *Fundamental Concepts of Mathematics* (2)—Two lectures.

Foundations of arithmetic, algebra, geometry, and analysis. The evolution of such concepts as number, limit, continuity, and infinity; the axioms of geometry; spatial forms and measurement; the concepts of space, time, and matter, leading up to the theory of relativity. (Dantzig.)

MATH. 122 s. *History of Mathematics* (2)—Two lectures.

History of arithmetic, algebra, geometry, the calculus, and the theory of functions; from the period of classical Greece to modern times. (Not given in 1936-1937.) (Dantzig.)

MATH. 123 f. *Theory of Equations* (2)—Two lectures. Prerequisite, Math. 16 y.

Symmetric functions; elimination; the fundamental theorem of algebra; algebraic solution of equations; the Galois theory; asymptotic solutions of equations. (Not given in 1936-1937.) (Taliaferro.)

MATH. 124 s. *Theory of Numbers* (2)—Two lectures. Prerequisite, Math. 16 y.

Linear congruences, continued fractions and diophantine equations; criteria of primality; quadratic residues; higher congruences; the Problem of Fermat. (Dantzig.)

MATH. 125 f. *Plane Curves* (2)—Two lectures. Prerequisite, Math. 16 y. Infinitesimal properties of plane curves; contact and osculation; asymptotes and singular points; algebraic curves; polarity; the Plucker characters of a curve; cubic and quartic curves. (Alrich.)

MATH. 126 s. *Analytic Geometry in Space* (2)—Two lectures. Prerequisite, Math. 16 y.

Point, plane, and line; line geometry; quadratic surfaces; twisted cubics; algebraic curves and surfaces; many-dimensional geometry. (Not given in 1936-1937.) (Alrich.)

MATH. 127 f. *Advanced Topics in Calculus* (2)—Two lectures. Prerequisite, Math. 16 y.

Evaluation of definite integrals; expansion into series; line and surface integrals; the theorems of Green and Stokes; elements of the calculus of variations. (Yates.)

MATH. 128 s. *Advanced Differential Equations* (2)—Two lectures. Prerequisite, Math. 16 y.

Existence theorems; integration in series; asymptotic solutions; general theory of linear equations; ordinary differential equations of the second order; singular solutions; elements of partial differential equations. (Yates.)

MATH. 129 f. *Non-Euclidean Geometry* (2)—Two lectures. Prerequisite, Math. 16 y.

Evolution of geometrical ideas; the axioms of geometry; theory of parallels; projective approach to geometrics of Lobatchevsky and Riemann; the Gayley-Klein theory; the problem of space and the theory of relativity. (Dantzig.)

MATH. 130 f. *Modern Algebra* (2)—Two lectures. Prerequisite, Math. 16 y.

Sets, groups, and extension of groups; polynomials; rings and fields; general theory of ideals; polynomial ideals; elements of algebraic geometry. (Not given in 1936-1937.) (Tompkins.)

MATH. 131 s. *Analytical Mechanics* (2)—Two lectures. Prerequisite, Math. 16 y and Math. 126 s.

Kinematics; the dynamics of a particle; statics; the principle of D'Alembert; the dynamics of a system; the equations of Lagrange and Jacoby; the principle of Hamilton. (Alrich.)

MATH. 132 s. *Theory of Probabilities* (2)—Two lectures. Prerequisite, Math. 16 y.

Frequency and probability; the concept of "equally likely"; combinatorial analysis; addition and multiplication theorems; frequency of distribution; continuous probabilities; applications to statistics, theories of errors and correlations, and to molecular theories. (Not given in 1936-1937.) (Dantzig.)

MATH. 133 f. *Famous Mathematical Problems* (2)—Two lectures. Prerequisite, Math. 16 y and 17 y. Open only to students with outstanding records in mathematical studies.

Prime numbers; the problem of Fermat; trisection of angles; regular polygons and kindred problems; squaring the circle; transcendentalism of π and e ; famous integrals; maxima and minima; probability problems; the three-body problem. (Dantzig.)

MATH. 140 y. *Undergraduate Seminar* (2)—One session.

Required of students who major in mathematics. This course is intended as a clearing house of problems which arise in the undergraduate courses in mathematics. (Dantzig, Yates, Alrich, Tompkins.)

For Graduates

(With the exception of the Graduate Seminar, Math. 240 y, all the courses listed below are taught on alternate years.)

MATH. 221 f. *Theory of Functions of a Complex Variable* (2)—Two lectures. Prerequisite, Math. 127 f.

Cauchy-Riemann conditions; power series and infinite products; conformal mapping; the Cauchy integral theory; residues and periods; uniform functions; analytical continuation. (Yates.)

MATH. 221 s. *Theory of Functions of a Real Variable* (2)—Two lectures. Prerequisites, Math. 16 y and Math. 121 s.

Logical development of the concept of number; aggregates, point-sets; convergence, limit; continuous and discontinuous functions; differentiation and generalized integration. (Not given in 1936-1937.) (Tompkins.)

MATH. 223 s. *Vectors and Matrices* (2)—Two lectures. Prerequisite, Math. 123 f.

Scalars, vectors, matrices, and determinants; transformations; linear dependence; canonical forms; elementary divisors; applications to geometry and quantum theory. (Tompkins.)

MATH. 224 f. *Algebraic Geometry* (2)—Two lectures. Prerequisites, Math. 16 y and Math. 125 f.

Bi-rational transformations; invariants of algebraic curves and surfaces; residuation; genus. (Not given in 1936-1937.) (Alrich.)

MATH. 225 f. *Projective Geometry* (2)—Two lectures. Prerequisites, Math. 125 f and 126 s.

The postulates of geometry; metric and descriptive properties; the principle of duality; the group of collineations; projective equivalence; projective theory of curves; projective differential geometry; non-Euclidean geometry. (Not given in 1936-1937.) (Dantzig.)

MATH. 226 s. *Infinitesimal Geometry* (2)—Two lectures. Prerequisites, Math. 16 y, Math. 125 f, and Math. 126 s.

Principles of vector analysis; skew curves and surfaces; curvature, asymptotic lines and geodesics; triple orthogonal systems; the problem of space structure. (Dantzig.)

MATH. 227 f. *Infinite Processes* (2)—Two lectures. Prerequisites, Math. 127 f and 128 s.

Criteria of convergence for series and products; continued fractions; trigonometric series; series of polynomials; orthogonal functions; functions defined by power series. (Alrich.)

MATH. 228 s. *Elliptic Functions* (2)—Two lectures. Prerequisite, Math. 221 f.

The theories of Legendre and Jacoby; the Weierstrass theory; doubly periodic functions; elliptic integrals; applications to algebra, geometry, and mechanics. (Not given in 1936-1937.) (Yates.)

MATH. 229 f. *Calculus of Variations* (2)—Two lectures. Prerequisite, Math. 127 f and 128 s.

Classical problems; the conditions of Euler; the Weierstrass theory; strong and weak minima; case of extremals with variable endpoints; extension to multiple integrals. (Not given in 1936-1937.) (Yates.)

MATH. 230 s. *Continuous Groups of Transformations* (2)—Two lectures. Prerequisites, Math. 126 s and Math. 223 s.

Correspondence; transformation; semi-groups and groups; invariants; the Lie theory of groups; infinitesimal transformations; contact transformations; applications to differential equations and to geometry. (Not given in 1936-1937.) (Dantzig.)

MATH. 231 s. *Partial Differential Equations with Applications to Mathematical Physics* (2)—Two lectures. Prerequisites, Math. 127 f and Math. 128 s.

Partial differential equations of the first and second order; linear equations; total differential equations; equations of the Monge-Ampere type; the Laplace equation; harmonics; applications to electricity, heat, elasticity, and hydrodynamics; potential theory. (Yates.)

MATH. 232 s. *The Theory of Relativity* (2)—Two lectures. Prerequisites, Math. 226 s and Math. 131 f.

History of the problem of relativity; the Maxwell equations; special theory of relativity; elements of tensor analysis; the general theory of relativity. (Not given in 1936-1937.) (Tompkins.)

MATH. 240 y. *Graduate Seminar* (2)—One session.

Required for all graduate students. Intended as a clearing house of problems arising in the graduate courses. Reports on progress on dissertations and critical discussion of results achieved.

(Dantzig, Yates, Alrich, Tompkins.)

MILITARY SCIENCE AND TACTICS

PROFESSOR OF MILITARY SCIENCE AND TACTICS, LIEUTENANT COLONEL JOSEPH D. PATCH, U. S. A.; ASSISTANT PROFESSORS MAJOR HOWARD CLARK, 2D, MAJOR FRANK WARD, AND ONE OFFICER TO BE DETAILED;
WARRANT OFFICER WILLIAM H. McMANUS;
CORPORAL GEORGE J. UHRINAK

*BASIC COURSE

Freshman Year—1 lecture; 2 drill periods.

M. I. 1 y. *Basic R. O. T. C.* (2).

The following subjects are covered:

First Semester

National Defense Act, including basic organization and the R. O. T. C.; military courtesy, command and leadership; military hygiene and first aid; marksmanship.

Second Semester

Physical drill, command and leadership, map reading; military history and policy; military hygiene and first aid; citizenship; international situation.

Sophomore Year—1 lecture; 2 drill periods.

M. I. 2 y. *Basic R. O. T. C.* (4).

The following subjects are covered:

First Semester

Scouting and patrolling, automatic rifle, military history, leadership.

Second Semester

Military history, musketry, combat principles of the squad and section, leadership.

**ADVANCED COURSE

Junior Year—3 lectures; 2 drill periods.

M. I. 101 y. *Advanced R. O. T. C.* (6).

The following subjects are covered:

First Semester

Aerial photograph reading, machine guns, howitzer weapons, combat principles, leadership.

* Required of qualified students.
** Elective for qualified students.

Second Semester

Combat principles of rifle, machine gun, and howitzer platoons, pistol marksmanship, review of rifle marksmanship, leadership.

Senior Year—3 lectures; 2 drill periods.

M. I. 102 y. *Advanced R. O. T. C.* (6).

The following subjects are covered:

First Semester

Combat principles (including organization of larger combat units), command and leadership, weapons (tanks), chemical agents and uses, mechanization.

Second Semester

Company administration, military history and policy, military law, Officers' Reserve Corps regulations.

MODERN LANGUAGES

PROFESSOR FALLS; ASSOCIATE PROFESSOR KRAMER; ASSISTANT PROFESSORS DARBY, SPANN; MISS WILCOX, MR. SCHWEIZER, MR. EVANGELIST, MRS. BLEW, MISS GOODNER.

All students whose major is in Modern Languages are required to take *Introduction to Comparative Literature* (Comp. Lit. 101 f and 102 s) and a *Conference Course in Reading* (French, German, Spanish 120). The following courses are recommended: *General European History* (H. 1 y), *Introduction to Philosophy* (Phil. 1 f or 1 s), *The Old Testament as Literature* (Comp. Lit. 104 f), *Prose and Poetry of the Romantic Age* (Eng. 113 f and 114 s), *Romanticism in France and Germany* (Comp. Lit. 105 f and 106 s). For a major in German, *Anglo-Saxon* (Eng. 103 y).

Specific requirements for the majors in the different languages are as follows: for French, French 9 y, 10 y, 15 y, 120, and two additional year-courses in literature in the 100 group; for German, German 10 y, 120, and two additional year-courses in the 100 group; for Spanish, Spanish 6 y, 15 y, 120, and two additional year-courses in the 100 group.

A. French

FRENCH 1 y. *Elementary French* (6)—Three lectures. Students who offer two units in French for entrance, but whose preparation is not adequate for second-year French, receive half credit for this course.

Elements of grammar; composition; pronunciation and translation.

FRENCH 2 s. *Elementary Conversation* (1)—One lecture. Prerequisite, the grade of A or B in the first semester of French 1 y. Students who are interested in French, and who have done well in the first semester of the elementary year-course, should take this course in conjunction with the second semester of French 1 y.

FRENCH 3 y. *Second-Year French* (6)—Three lectures. Prerequisite, French 1 y or equivalent. Students who offer three units in French for entrance, but whose preparation is not adequate for work beyond the level of French 3 y, receive half credit for this course.

Study of grammar continued; composition; conversation; translation of narrative and technical prose.

FRENCH 4 f. *Grammar Review* (2)—Two lectures. Designed particularly for students who enter with three or more units in French, who expect to do advanced work in the French language or literature, but who are not prepared to take French 10 y. Properly qualified students may elect this course at the same time as French 6 y, 7 y, 8 y, 15 y.

FRENCH 5 s. *Intermediate Conversation* (2)—Two lectures. Prerequisite, the grade of A or B in the first semester of French 3 y. Students who expect to take advanced work in French literature, and who have completed the first semester of French 3 y with the grade of A or B, should take this course in conjunction with the second semester of French 3 y.

Practical exercises in conversation; discussion in French of simple texts in prose and verse.

FRENCH 6 y. *The Development of the French Novel* (6)—Three lectures.

Introductory study of the history and growth of the novel in French literature; of the lives, works, and influence of important novelists. Reports. (Not given in 1936-1937.)

FRENCH 7 y. *The Development of the French Drama* (6)—Three lectures.

Introductory study of the French drama of the seventeenth, eighteenth, and nineteenth centuries. Translation and collateral reading. Reports.

FRENCH 8 y. *Readings in Contemporary French* (6)—Three lectures.

Translation; collateral reading; reports on history, criticism, fiction, drama, lyric poetry. (Not given in 1936-1937.)

FRENCH 9 y. *French Phonetics* (2)—One lecture. Prerequisite, French 1 y.

FRENCH 10 y. *Intermediate Grammar and Composition* (4)—Two lectures. Prerequisite, French 3 y.

(French 9 y and 10 y are required of students preparing to teach French.)

FRENCH 15 y. *Introduction to French Literature* (6)—Three lectures. Prerequisite, French 3 y.

An elementary survey introducing the student to the chief authors and movements in French literature. This course is given in French.

For Advanced Undergraduates and Graduates

A more intensive survey of modern French literature is offered by means of rotating courses roughly divided by centuries.

FRENCH 102 y. *French Literature of the 17th Century* (4)—Two lectures. (Wilcox.)

FRENCH 103 y. *French Literature of the 18th Century* (4)—Two lectures. (Not given in 1936-1937.) (Falls.)

FRENCH 104 y. *French Literature of the 19th Century* (4)—Two lectures. (Not given in 1936-1937.) (Wilcox.)

FRENCH 105 y. *French Literature of the 20th Century* (4)—Two lectures. (Falls.)

FRENCH 110 y. *Advanced Composition* (4)—Two lectures. Prerequisite, French 10 y.

(This course is required of students preparing to teach French.) (Falls.)

FRENCH 120. *Conference Course in Reading* (credits allowed: majors, 4 semester hours; minors, 2 semester hours.)

A two-year course open to majors and minors in French. It proposes: (1) to fix the attention of the student upon his field of concentration as a whole rather than upon the detailed knowledge of the subject-matter of such courses as he has taken in the field; (2) to develop in the student the ability to read independently. Conferences with qualified members of the department take the place of formal lectures. This course prepares majors and minors in French for the comprehensive examination in modern French literature at the end of the senior year.

For Graduates

FRENCH 201 y. *Research* (2-4)—Credits determined by work accomplished. (Staff.)

FRENCH 202 y. *Diderot and the Encyclopaedists* (4)—Two lectures. (Not given in 1936-1937.) (Falls.)

FRENCH 203 y. *Aspects and Conceptions of Nature in French Literature of the 18th Century* (4)—Two lectures. (Not given in 1936-1937.) (Falls.)

FRENCH 204 y. *Georges Duhamel, Poet, Dramatist, Novelist* (4)—Two lectures. (Falls.)

FRENCH 205 y. *French Literature of the Middle Ages and the Renaissance* (4)—Two lectures. (Not given in 1936-1937.) (Darby.)

FRENCH 210 y. *Seminar* (2-4)—One meeting weekly. (Required of all graduate students in French.)

Attention is also called to Comparative Literature 105 f, *Romanticism in France*.

B. German

GERMAN 1 y. *Elementary German* (6)—Three lectures. Students who offer two units in German for entrance, but whose preparation is not adequate for second-year German, receive half credit for this course.

Elements of grammar; composition; pronunciation and translation.

GERMAN 2 s. *Elementary Conversation* (1)—One lecture. Prerequisite, the grade of A or B in the first semester of German 1 y. Students who are interested in German, and who have done well in the first semester of the elementary year-course, should take this course in conjunction with the second semester of German 1 y.

GERMAN 3 y. *Second-Year German* (6)—Three lectures. Prerequisite, German 1 y or equivalent. Students who offer three units in German for entrance, but whose preparation is not adequate for work beyond the level of German 3 y, receive half credit for this course.

Reading of narrative and technical prose, grammar review and oral and written practice.

GERMAN 4 f. *Grammar Review* (2)—Two lectures. Designed particularly for students who enter with three or more units in German and who expect to do advanced work in the German language or literature, but who are not prepared to take German 10 y. Properly qualified students may elect this course at the same time as German 6 f or 8 f.

GERMAN 5 s. *Intermediate Conversation* (2)—Two lectures. Prerequisite, the grade of A or B in the first semester of German 3 y. Students who expect to take advanced work in German literature, and who have completed the first semester of German 3 y with the grade of A or B, should take this course in conjunction with the second semester of German 3 y.

Practical exercises in conversation; discussion in German of simple texts in prose and verse.

GERMAN 6 f. *Advanced German* (3)—Three lectures. Prerequisite, German 3 y or equivalent.

Rapid reading of novels and short stories from recent German literature. (Not given in 1936-1937.)

GERMAN 7 s. *Advanced German* (3)—Three lectures.

Continuation of German 6 f. (Not given in 1936-1937.)

GERMAN 8 f. *Advanced German* (3)—Three lectures. Prerequisite, German 3 y or equivalent.

Rapid reading of dramas from recent German literature. This course alternates with German 6 f.

GERMAN 9 s. *Advanced German* (3)—Three lectures.

Continuation of German 8 f.

GERMAN 10 y. *German Grammar and Composition* (4)—Two lectures. Prerequisite, German 2 y.
(This course is required of students preparing to teach German.)

For Advanced Undergraduates and Graduates

GERMAN 101 f. *German Literature of the 18th Century* (3)—Three lectures.

The earlier classical literature. (Not given in 1936-1937.) (Spann.)

GERMAN 102 s. *German Literature of the 18th Century* (3)—Three lectures.

The later classical literature. (Not given in 1936-1937.) (Spann.)

GERMAN 103 f. *German Literature of the 19th Century* (3)—Three lectures.

Romanticism and Young Germany. (Spann.)

GERMAN 104 s. *German Literature of the 19th Century* (3)—Three lectures.

The literature of the Empire. (Spann.)

GERMAN 120. *Conference Course in Reading* (credits allowed: majors, 4 semester hours; minors, 2 semester hours).

A two-year course open to majors and minors in German. It proposes: (1) to fix the attention of the student upon his field of concentration as a whole rather than upon the detailed knowledge of the subject-matter of such courses as he has taken in the field; (2) to develop in the student the ability to read independently. Conferences with qualified members of the department take the place of formal lectures. This course prepares majors and minors in German for the comprehensive examination in modern German literature at the end of the senior year.

For Graduates

GERMAN 201 y. *Research* (2-4)—Credits determined by work accomplished. (Staff.)

GERMAN 202 y. *The Modern German Drama* (4)—Two lectures.

Study of the naturalistic, neo-romantic, and expressionistic drama against the background of Ibsen and other international figures. (Spann.)

GERMAN 203 y. *Schiller* (4)—Two lectures.

Study of the life and works of Schiller, with emphasis on the history of his dramas. (Not given in 1936-1937.) (Spann.)

GERMAN 210 y. *Seminar* (2-4)—One meeting weekly.

(Required of all graduate students in German.)
Attention is also called to Comparative Literature 106 s, *Romanticism in Germany*.

C. Spanish

SPANISH 1 y. *Elementary Spanish* (6)—Three lectures. Students who offer two units in Spanish for entrance, but whose preparation is not adequate for second-year Spanish, receive half credit for this course.

Elements of grammar; composition; pronunciation and translation.

SPANISH 2 s. *Elementary Conversation* (1)—One lecture. Prerequisite, the grade of A or B in the first semester of Spanish 1 y. Students who are interested in Spanish, and who have done well in the first semester of the elementary year-course, should take this course in conjunction with the second semester of Spanish 1 y.

SPANISH 3 y. *Second-Year Spanish* (6)—Three lectures. Prerequisite, Spanish 1 y or equivalent. Students who offer three units in Spanish for entrance, but whose preparation is not adequate for work beyond the level of Spanish 3 y, receive half credit for this course.

Reading of narrative works and plays; grammar review; oral and written practice.

SPANISH 4 f. *Grammar Review* (2)—Two lectures. Designed particularly for students who enter with three or more units in Spanish, who expect to do advanced work in the Spanish language or literature, but who are not prepared to take Spanish 6 y. Properly qualified students may elect this course at the same time as Spanish 7 f or 15 y.

SPANISH 5 s. *Intermediate Conversation* (2)—Two lectures. Prerequisite, the grade of A or B in the first semester of Spanish 3 y. Students who expect to take advanced work in Spanish literature, and who have completed the first semester of Spanish 3 y with the grade of A or B, should take this course in conjunction with the second semester of Spanish 3 y.

Practical exercises in conversation; discussion in Spanish of simple texts in prose and verse.

SPANISH 6 y. *Advanced Composition and Conversation* (4)—Two lectures. Prerequisite, Spanish 3 y or equivalent.

Introduction to phonetics; oral and written composition.

(This course is required of students preparing to teach Spanish.)

SPANISH 7 f. *The Spanish Novel* (3)—Three lectures.

Designed to develop facility in reading. Somewhat simplified, edited texts of classic novels and short stories of the Golden Age will be used. (Not given in 1936-1937.)

SPANISH 8 s. *The Spanish Novel* (3)—Three lectures.

Continuation of Spanish 7 f. Reading of some modern novels. (Not given in 1936-1937.)

SPANISH 15 y. *Introduction to Spanish Literature* (6)—Three lectures.

An elementary survey introducing the student to the chief authors and movements in Spanish literature. This course is given in Spanish.

For Advanced Undergraduates and Graduates

SPANISH 101 f. *Spanish Poetry* (3)—Three lectures.
The epic, the ballad and popular poetry, early lyrics, poetry of the Golden Age. (Not given in 1936-1937.) (Darby.)

SPANISH 102 s. *Spanish Poetry* (3)—Three lectures.
Continuation of Spanish 101 f. Poetry of the 18th, 19th, and 20th centuries. (Not given in 1936-1937.) (Darby.)

SPANISH 103 f. *The Spanish Drama* (3)—Three lectures.
The drama of the Golden Age. (Darby.)

SPANISH 104 s. *The Spanish Drama* (3)—Three lectures.
Continuation of Spanish 103 f. The drama since Calderon. (Darby.)

SPANISH 120. *Conference Course in Reading* (credits allowed: majors, 4 semester hours; minors, 2 semester hours).

A two-year course open to majors and minors in Spanish. It proposes: (1) to fix the attention of the student upon his field of concentration as a whole rather than upon the detailed knowledge of the subject-matter of such courses as he has taken in the field; (2) to develop in the student the ability to read independently. Conferences with qualified members of the department take the place of formal lectures. This course prepares majors and minors in Spanish for the comprehensive examination in modern Spanish literature at the end of the senior year.

For Graduates

SPANISH 201 y. *Research* (2-4)—Credits determined by work accomplished. (Staff.)

SPANISH 202 y. *The Golden Age in Spanish Literature* (6)—Three lectures.
Detailed study of the classical authors. (Not given in 1936-1937.) (Darby.)

SPANISH 203 y. *Cervantes* (6)—Three lectures.
The life and times of Cervantes; principal prose works. (Darby.)

SPANISH 210 y. *Seminar* (2-4)—One meeting weekly.
(Required of all graduate students in Spanish.)

MUSIC

MR. RANDALL, SERGT. SIEBENEICHEN, MRS. BLAISDELL.

MUSIC 1 y. *Music Appreciation* (2)—One lecture.

A study of all types of classical music with a view to developing the ability to listen and enjoy. Lecture recitals will be presented with the aid of performers and records. A study of the orchestra and the instruments that

it employs. A study of musical form. The development of the opera and oratorio. Great singers of the past and present. Well-known musicians occasionally appear as guest lecturers and performers.

MUSIC 2 y. *History of Music* (2)—One lecture.

A comprehensive course in the history of music covering the development of all forms of music from ancient times through the renaissance; the classic and the romantic schools; and the more modern composers.

MUSIC 3 y. *University Chorus* (1).

This course is offered for those interested in part-singing. After voice trials, students who have ability to read and sing music of the grade of easy songs are admitted. Members of the Women's Chorus and the Men's Glee Club indicated hereafter are combined at times for mixed chorus singing.

(a) Women's University Chorus. Study of part-singing for women's voices. Credit is awarded for each year's regular attendance at weekly rehearsals and participation in public performances of the chorus.

(b) Men's Glee Club. Study of part-singing for men's voices. Credit is awarded for each year's regular attendance at weekly rehearsals and participation in public performances of the Glee Club.

MUSIC 4 y. *University Orchestra* (1).

The purpose of the University Orchestra is study of the classics. Works of the standard symphonists from Haydn and Mozart to Wagner and the modern composers are used. Students who play orchestral instruments are eligible for membership. At least one rehearsal of two hours duration is held each week, and all players are expected to take part in public performances.

MUSIC 5 y. *Harmony* (4)—Two lectures.

This course includes a study of major and minor scales, intervals, harmonic progressions, primary and secondary triads in root position and first and second inversions, the dominant seventh chord in its root position and inversions.

The above theory is taught to give the student a basis for ear training, dictation, melody writing, and melody harmonization.

PHILOSOPHY

PROFESSOR MARTI

PHIL. 1 f or s. *Introduction to Philosophy* (3)—Three lectures.

Not open to freshmen.

A study of the development of philosophical thought from the early Greeks to the modern era.

PHIL. 11 s. *Modern European Philosophy* (3)—Three lectures. Prerequisite, Phil. 1 f or s.

A continuation of Phil. 1 f or s. Alternates with Phil. 12 s.

PHIL. 12 s. *American Philosophy* (3)—Three lectures. Prerequisite, Phil. 1 f or s.

A continuation of Phil. 1 f or s. Alternates with Phil. 11 s. (Not offered in 1936-1937.)

PHIL. 21 f. *Aesthetics* (3)—Three lectures. Prerequisite, Phil 1 f or s, and prerequisite or, by special permission, corequisite: Art 1 f or s, or Music 1 y or 2 y, or a 100 course in literature.

An historical and systematic introduction to the philosophy of art. Alternates with Phil. 22 f and 23 f.

PHIL. 22 f. *Logic* (3)—Three lectures. Prerequisite, Phil 1 f or s, and satisfactory preparation in mathematics or science.

An introductory course, designed especially for science majors. Alternates with Phil. 21 f and 23 f. (Not offered in 1936-1937.)

PHIL. 23 f. *Ethics* (3)—Three lectures. Prerequisite, Phil. 1 f or s. A study of the implications of problems of the good life. Alternates with Phil. 21 f and 22 f. (Not offered in 1936-1937.)

PHIL. 31 f. *Readings in Philosophy* (1)—One hour of discussion. Prerequisite, Phil. 1 f or s.

One or several relatively easy philosophical works will be read, and discussed in class. The topic will be changed, from semester to semester, although the same work may be studied again, after three or four semesters. Not more than two credits allowed to any one student.

PHIL. 32 s. *Readings in Philosophy* (1)—One hour of discussion. Prerequisite, Phil. 1 f or s. Similar to Phil. 31 f. Phil. 31 f not a prerequisite.

PHIL. 33 f. *Readings in Philosophy* (1)—One hour of discussion. Prerequisite, Phil. 1 f or s. (Not given in 1936-1937.)

PHIL. 34 s. *Readings in Philosophy* (1)—One hour of discussion. Prerequisite, Phil. 1 f or s. (Not given in 1936-1937.)

PHIL. 101 f. *Systems of Philosophy: KANT* (3)—Three hours of lectures, student reports, and discussion. Prerequisite, two courses in philosophy, and the permission of the professor.

The system of one philosopher, or the development of one movement, will be studied throughout the semester. The topic will be changed, from semester to semester, although, after three or four semesters, the same system may be chosen again. Not more than nine credits allowed to any one student. (Marti.)

PHIL. 102 s. *Systems of Philosophy: HEGEL* (3)—Three hours of lectures, student reports, and discussion. Prerequisite, two courses in philosophy, and the permission of the professor.

Continuation of Phil. 101 f.

(Marti.)

PHIL. 103 f. *Systems of Philosophy* (3)—Three hours of lectures, student reports, and discussion. Prerequisite, two courses in philosophy, and the permission of the professor.

Similar to Phil. 101 f. (Not given in 1936-1937.) (Marti.)

PHIL. 104 s. *Systems of Philosophy* (3)—Three hours of lectures, student reports, and discussion. Prerequisite, two courses in philosophy, and the permission of the professor.

Similar to Phil. 101 f. (Not given in 1936-1937.) (Marti.)

PHYSICS

PROFESSOR EICHLIN; DR. DICKINSON, MR. CLARK.

PHYS. 1 y. *General Physics* (8)—Three lectures; one laboratory. Required of students in the Pre-medical curriculum. This course satisfies the minimum requirement for a science major. Prerequisites, Math. 11 f and 14 s.

A study of the physical phenomena in mechanics, heat, sound, magnetism, electricity, and light.

PHYS. 2 y. *General Physics* (10)—Four lectures; one laboratory. Required of all students in the Engineering curricula and of those with chemistry, mathematics, and physics majors. Elective for other students. Prerequisites, concurrent Math. 16 y and 17 y.

A study of mechanics, heat, sound, magnetism, electricity, and light.

PHYS. 3 y. *Elementary Physics* (6)—Three lectures. This introductory course is designed to meet the need of students who desire to become acquainted with the fundamental principles of physics. Instruction will be given by lectures, recitations, and experimental demonstrations. This course, with such additional work as may be deemed necessary by the Department, will be accepted as the equivalent of Phys. 1 y.

For Advanced Undergraduates and Graduates

PHYS. 101 f. *Precision of Measurements* (3)—Three lectures. Prerequisites, Phys. 1 y or 2 y, and Math. 16 y and 17 y.

A discussion of the principles underlying the treatment of experimental data, as to precision of observations, errors, interpolation, curve analysis, etc., with emphasis on the planning of investigations involving measurements. The course is intended as an introduction to quantitative experimental work. (Eichlin.)

PHYS. 102 s. *Quantitative Physical Measurements* (2)—One lecture; one laboratory. Prerequisite, Phys. 101 f.

This course, supplementing Phys. 101 f, is designed to familiarize the student with the manipulation of various types of apparatus used in experimentation in physical problems, and the adaptation and analysis of data so obtained. (Eichlin.)

PHYS. 103 y. *Advanced Physics* (6) — Three lectures. Prerequisite, Phys. 1 y.

This course, supplementing Phys. 1 y, is an advanced study of physical phenomena in optics, spectroscopy, conduction of electricity through gases, photoelectricity, etc., with a comprehensive review of basic principles involved. It is intended to familiarize the student in a general survey with some of the recent developments in physics. (Dickinson.)

PHYS. 104 y. *Advanced Experiments* (6)—One lecture; two laboratories. Prerequisite, Phys. 103 y.

This course, supplementing Phys. 1 y, is intended to provide the student with experience in experimental physics. (Dickinson.)

PHYS. 105 f. *Heat and Thermodynamics* (3)—Two lectures; one laboratory. Prerequisite, Phys. 2 y.

The classical phenomena of heat and radiation phenomena are developed on the basis of the kinetic molecular theory and the quantum theory. The first and second laws of thermodynamics are applied to physical processes. (Dickinson.)

PHYS. 106 s. *Theoretical Mechanics* (3)—Two lectures; one laboratory. Prerequisite, Phys. 2 y.

An analytical treatment of the fundamental principles of kinematics and dynamics is presented, with problems and laboratory exercises to illustrate these principles. The use of generalized coördinates is illustrated. The equations of La Grange are applied to selected topics in the field of dynamics. (Dickinson.)

PHYS. 107 f. *Optics* (3)—Two lectures; one laboratory. Prerequisite, Phys. 2 y.

A study is made of selected topics in the refraction, reflection, interference, diffraction, and polarization of light. The principles are employed on a detailed study of optical systems of telescope, microscope, spectroscope, and interferometer. (Dickinson.)

PHYS. 108 s. *Electricity and Magnetism* (3)—Two lectures; one laboratory. Prerequisite, Phys. 2 y.

A study is made of elementary and mathematical theory of electrostatics, magnetostatics, magnetism, electrical currents, etc.

An experimental study of electrical instruments and their use in physical measurements is included. (Dickinson.)

PHYS. 109 y. *Electric Discharge* (6)—Two lectures; one laboratory. Prerequisites, at least two courses of the 105 f-108 s group.

The discrete nature of matter, electricity, and radiation is emphasized from an empirical point of view. The determination of the fundamental electronic and molecular constants is treated in detail. The process of electrical discharge through gas and vacuum is ramified to include discussion of radioactivity, photoelectricity, thermionics, and atomic structure. (Not given in 1936-1937.) (Dickinson.)

Graduates

PHYS. 201 f. *Atomic Structure* (3)—Three lectures.

Development of theories on the structure of the atom through discussion of optical and X-ray spectra, atomic models as applied to the periodic table, and related topics. (Eichlin.)

PHYS. 202 s. *Advanced Spectroscopy* (3)—Three lectures. Prerequisite, Phys. 201 f.

Continuation of Phys. 201 f. (Eichlin.)

PHYS. 203 f. *Quantum Theory* (3)—Three lectures.

Discussion of the application of the principles of the quantum theory to black body radiation, spectroscopy, collision processes, valence, etc. (Eichlin.)

PHYS. 204 s. *Nuclear Physics* (3)—Three lectures.

Discussion of the constitution of the nucleus, natural radioactivity disintegration processes, neutron, positron, nuclear energy states, artificial disintegration, etc. (Eichlin.)

PHYS. 205 f. *Fundamental Concepts of Modern Physics* (3)—Three lectures.

Comprehensive survey of the history of physics; the electromagnetic theory of radiation; interaction of radiation and matter; introduction to the quantum mechanics. (Not given in 1936-1937.) (Eichlin.)

PHYS. 206 s. *Fundamental Concepts of Modern Physics* (3)—Three lectures. Prerequisite, Phys. 205 f.

Continuation of Phys. 205 f. (Not given in 1936-1937.) (Eichlin.)

PHYS. 207 f. *Electrodynamics* (3)—Three lectures.

A mathematical study of electrostatics and electromagnetics with applications to diffraction, dispersion, electro- and magneto-optics. (Not given in 1936-1937.) (Dickinson.)

PHYS. 208 s. *Physical Optics* (3)—Three lectures.

A mathematical study of the electromagnetic theory of light, with applications to interference, diffraction, dispersion, polarization. (Not given in 1936-1937.) (Dickinson.)

PHYS. 209 y. *Seminar* (2).

Presentation of reports and discussion of current developments in physics and of original investigations on special problems. (Staff.)

PHYS. 210 y. *Research*.

The investigation of special problems in physics. (Staff.)

POLITICAL SCIENCE

PROFESSOR MAGRUDER; ASSISTANT PROFESSOR STEINMEYER

POL. SCI. 1 f or s. *American National Government* (3)—Three lectures. Open to freshmen.

A study of the legislative, executive, and judicial organization and functions of the national government of the United States. This is the basic course for political science majors.

POL. SCI. 4 s. *State Government* (2)—Two lectures. Open to freshmen.

A study of the legislative, executive, and judicial functions of the States, with emphasis given to the government of Maryland.

POL. SCI. 5 f. *Municipal Government* (2)—Two lectures. Prerequisite, Pol. Sci. 1 f or s.

A study of the organization and functions of the various types of city government in the United States. Course includes a visit to the City of Baltimore, the purpose of which is to study the important departments at work.

POL. SCI. 7 f. *Comparative Government* (2)—Two lectures. Prerequisite, Pol. Sci. 1 f or s.

A survey of the British Empire, including a study in detail of the parliamentary system of Great Britain. Course covers the governmental systems of France and Switzerland.

POL. SCI. 8 s. *Comparative Government* (2)—Two lectures. Prerequisite, Pol. Sci. 1 f or s.

A comparative study of the governments of Germany, Russia, Italy, Japan, etc.

For Advanced Undergraduates and Graduates

POL. SCI. 101 f. *International Law* (3)—Three lectures.

A study of the principles governing international intercourse in time of peace as well as war, as illustrated in texts and cases. (Steinmeyer.)

POL. SCI. 102 s. *International Relations* (3)—Three lectures.

A study of the nature and importance of international relations; underlying problems; agencies of control; development of international organizations. (Steinmeyer.)

POL. SCI. 103 f. *Current Problems in Government* (2)—Two lectures.

This course deals with the governmental problems having an international character, such as the causes of war, the problem of neutrality, propaganda, etc. Course conducted by lecture and discussion method, with students required to report on readings from current literature. (Steinmeyer.)

POL. SCI. 104 s. *Current Problems in Government* (2)—Two lectures.

This course, conducted along lines similar to those of Pol. Sci. 103 f, deals with domestic problems of the government of the United States. (Magruder.)

POL. SCI. 105 f. *Constitutional Law* (3)—Three lectures. Prerequisite, Pol. Sci. 1 f or s.

A study of constitutional law in the United States, as interpreted by the Supreme Court. Special attention is given to the American federal system, the amending clause, the powers of the President, Congress, and the National Judiciary. (Magruder.)

POL. SCI. 107 f. *Political Parties and Public Opinion* (2)—Two lectures. Prerequisite, Pol. Sci. 1 f or s.

The political party as a part of the political machinery; party organization; party activities; campaign methods; public opinion and party leadership; the true function of parties. (Not given in 1936-1937.) (Magruder.)

POL. SCI. 109 f. *Early Political Theory* (2)—Two lectures.

A survey of the principal theorists who have influenced political thought and development. This course covers the various theories from Plato to the middle of the nineteenth century. (Steinmeyer.)

POL. SCI. 110 s. *Recent Political Thought* (2)—Two lectures.

A study of the political schools of thought from the middle of the nineteenth century to the present time. Special reference is made to such recent developments as Socialism, Communism, Fascism, Nazism, etc. (Steinmeyer.)

POULTRY HUSBANDRY

PROFESSOR WAITE; ASSOCIATE PROFESSOR QUIGLEY.

POULTRY 1 s. *Farm Poultry* (3)—Three lectures.

A general course in poultry raising, including housing, feeding, incubation, brooding, breeds, breeding, selection of stock, culling, general management, and marketing.

For Advanced Undergraduates and Graduates

POULTRY 102 f. *Poultry Keeping* (4)—Two lectures; two laboratories. Students encouraged but not required to take Poultry 1 s as a prerequisite.

A study of housing and yarding, practice in making poultry house plans, feeding, killing, and dressing.

POULTRY 103 s. *Poultry Production* (4)—Two lectures; two laboratories. Prerequisites, Poultry 1 s and 102 f.

The theory and practice of incubation and brooding, both natural and artificial. Study of incubators and brooders, assembling, etc. Considerable stress will be placed on the proper growing of chicks into good laying pullets. General consideration of poultry disease. Caponizing.

POULTRY 104 f. *Poultry Breeds*. (4)—Two lectures; two laboratories. Prerequisites, Poultry 1 s, 102 f, and 103 s.

A study of the breeds of poultry, the judging of poultry, including culling, fitting for exhibition, and the methods of improvement by breeding.

POULTRY 105 s. *Poultry Management* (4)—Two lectures; two laboratories. Prerequisites, Poultry 1 s, 102 f, 103 s, and 104 f.

A general fitting together and assembling of knowledge gained in the previous courses. Culling, marketing, including both selling of poultry products and the buying of supplies, keeping poultry accounts, hatchery management and operation, a study of poultry profits, how to start.

PSYCHOLOGY

PROFESSOR SPROWLS.

PSYCH. 1 f or s. *Elements of Psychology* (3)—Two lectures and one discussion. Open to sophomores. Seniors receive but 2 credits.

An elementary course describing and explaining the basic facts of mental life and psychological terminology. It lays the foundation for a general understanding of psychological literature, as well as for advanced study in psychology.

For Advanced Undergraduates and Graduates

PSYCH. 102 f or s. *Experimental Psychology* (3)—One lecture and one laboratory. Prerequisite, Psych. 1 f or s.

Theoretical discussion and experimental investigation of the cutaneous, gustatory, visual, olfactory, auditory, and kinaesthetic modalities of experience. Kymographic recording of reflexes associated with systematic emotional and esthetic processes. (Sprowls.)

PSYCH. 106 s. *Mental Hygiene* (3)—Two lectures and one clinic at St. Elizabeth's Hospital. Prerequisite, Ed. Psych. 1 f or Psych. 1 f or s.

Designed especially for students of education, home economics, pre-medical and pre-legal courses. A study of mental disorders in terms of personal and social adaptation. Problems of adjustment in social relations: obsessions, fears, conflicts, inhibitions, and compensations. (Sprowls.)

For Graduates

ED. PSYCH. 200 f. *Systematic Educational Psychology* (3)—An advanced course for teachers and prospective teachers. Open only to graduate students.

Deals with the major contributions of psychology to educational theory from Herbert to the present time. (Sprowls.)

SOCIOLOGY

PROFESSOR MANNY; ASSOCIATE PROFESSOR SANDERSON;
ASSISTANT PROFESSORS MACKIE, CLOWES; MR. TILLET.

Soc. Sci. 1 y. *Introduction to the Social Sciences* (6)—One lecture; two discussions. Open to freshmen and sophomores only.

This course serves as an orientation to advanced work in the social sciences. In the first semester, the basis, nature, and evolution of society and social institutions are studied. During the second semester the major problems of modern citizenship are analyzed in terms of knowledge contributed by economics, history, political science, psychology, and sociology.

Soc. 1 f or s. *Principles of Sociology* (3)—Three discussions. Prerequisite, sophomore standing.

An analysis of society and the social processes; the relation of the individual to the group; social products; social change.

Soc. 2 s. *Cultural Anthropology* (2)—Two lectures. Prerequisite, sophomore standing.

An analysis of the cultures of several primitive and modern societies, the purpose of which is to ascertain the nature of culture and the processes related to it. Museum exhibits will be utilized.

For Advanced Undergraduates and Graduates

Soc. 101 f. *Rural Sociology* (2)—Two lectures. Each graduate student will be required to prepare an extra term paper.

The structure and functions of rural communities, ancient and modern; the evolution of rural culture; rural institutions and their problems; the psychology of rural life; composition and characteristics of the rural population; relation of rural life to the major social processes; the social aspects of rural planning. (Manny.)

Soc. 102 s. *Urban Sociology* (2)—Two lectures. Each graduate student will be required to prepare an extra term paper.

The origin and growth of cities; composition and characteristics of city populations; the nature and significance of urbanization; the social structure and functions of the city; urban personalities and groups; cultural conflicts arising out of the impact of urban environment. (Sanderson.)

Soc. 104 s. *Social Psychology* (3)—Three discussions. Prerequisite. Soc. 1 f or s or Psych. 1 f or s.

The development of human nature and personality as products of social experience and interaction; the behavior of public audiences, groups, crowds, and mobs; the development and functioning of such psycho-social forces as imitation, styles, fads, leadership, public opinion, propaganda, nationalism, etc. (Manny.)

Soc. 105 f. *Social Organization* (2)—Two lectures. Prerequisite, Soc. 1 f. Social groupings above the family in size as found among primitives and modern civilizations including neighborhoods, communities, special interest organizations, etc.; leadership and followership in organization activities; interorganizational conflict and coöperation. (Not offered in 1937-1938.)

Soc. 107 s. *Social Pathology* (3)—Three lectures. Prerequisite, Soc. 1 f, or consent of instructor.

Causative factors and social complications in individual and group pathological conditions; historic methods of dealing with dependent, defective, and delinquent classes. (Sanderson.)

Soc. 109 f. *Introduction to Social Work* (3)—Three lectures. Prerequisite, Soc. 107 s, or consent of instructor.

Brief historical review of the evolution of social work. Present day types of social work, institutional treatment, public and private agencies; the theory and technic of social case work; recent developments arising out of the depression; visits to representative social agencies. This course is intended primarily for persons intending to take advanced professional training in this field.

Soc. 110 s. *The Family* (2)—Two lectures. Prerequisite, Soc. 1 f.

Anthropological and historical backgrounds; biological, economic, psychological, and sociological bases of the family; the role of the family in personality development; family and society; family disorganization; family adjustment and social range. (Not given in 1936-1937.) (Sanderson.)

Soc. 111 f. *Recent Social Thought*. (2)—Two lectures. Prerequisite, Soc. 1 f, and consent of instructor; intended mainly for sociology majors and minors.

Critical study of the leading schools of sociological thought in various countries since 1900. (Not given in 1936-1937.)

Soc. 113 f. *Dynamics of Population* (2)—Two lectures. Prerequisite, Soc. 1 f and Gen. 111 f, or consent of instructor.

Causes of population growth and decline; major population migrations; population pressure and international problems; eugenic factors; statistical analyses of population trends in the United States. (Not given in 1937-1938.)

Soc. 115 f. *The Village* (2)—Two lectures. Prerequisite, junior standing. An extra term paper will be required of each post-graduate student.

The evolution of the American village; present day social structure and functions of the village; an analysis of village population; the relationship of the village to urban and open-country areas; village planning. (Not given in 1936-1937.) (Manny.)

For Graduates

Soc. 201 f or s. *Sociological Research* (2-4). Credit proportional to work accomplished.

Individual research projects involving either field work or analysis of compiled data. (Staff.)

Soc. 202 f or s. *Seminar in Sociological Theories* (2).

Assigned topics for discussion, dealing primarily with major sociological theories and problems. Designed for major students in the department of Sociology. (Staff.)

SPEECH

PROFESSOR RICHARDSON; ASSISTANT PROFESSOR WATKINS; MISS LOFGREN, MRS. PROVENSON.

SPEECH 1 y. *Reading and Speaking* (2)—One lecture.

The principles and technique of oral expression: enunciation, emphasis, inflection, and force. The preparation and delivery of short original speeches. Impromptu speaking. Theory and practice of parliamentary procedure.

SPEECH 2 f. *Advanced Public Speaking* (2)—Two lectures.

Advanced work on basis of Speech 1 y, with special applications and adaptations. At each session of the class a special setting is given for the speeches—civil, social, and political organizations, etc., and organizations in the fields of the prospective vocations of the different students. When a student has finished this course he will have prepared and delivered one or more speeches which would be suitable and appropriate before any and all bodies that he would probably have occasion to address in after-life.

SPEECH 3 s. *Advanced Public Speaking* (2)—Two lectures. Continuation of Speech 2 f.

SPEECH 4 y. *Oral Technical English* (2)—One lecture.

The preparation and delivery of speeches, reports, etc., on both technical and general subjects. Argumentation. This course is especially adapted to the needs of engineering students, and is coordinated with the seminars of the College of Engineering.

SPEECH 5 y. *Advanced Oral Technical English* (2)—One lecture.

This course is a continuation with advanced work of Speech 4 y. Much attention is given to parliamentary procedure. Some of the class programs are prepared by the students and carried out under student supervision. For junior engineering students only.

SPEECH 6 y. *Advanced Oral Technical English* (2)—One lecture.

Advanced work on the basis of Speech 5 y. Work not confined to class room. Students are encouraged to deliver addresses before different bodies in the University and elsewhere. Senior seminar. For senior engineering students only.

SPEECH 7 f. *Extempore Speaking* (1)—One lecture.

Much emphasis on the selection and organization of material. Class exercises in speaking extemporaneously on assigned and selected subjects. Newspaper and magazine reading essential.

SPEECH 8 s. *Extempore Speaking* (1)—One lecture.
Continuation of Speech 7 f.

SPEECH 9 f. *Debate* (2)—Two lectures.

A study of the principles of argumentation. Class work in debating. It is advised that those who aspire to intercollegiate debating should take this course.

SPEECH 10 s. *Argumentation* (2)—Two lectures.

Theory and practice of argumentation and debate. Similar to course Speech 9 f. This course is offered for the benefit of those who may find it impracticable to take this work in the first semester.

SPEECH 11 f. *Oral Reading* (1)—One lecture.

A study of the technique of vocal expression. The oral interpretation of literature. The practical training of students in the art of reading.

SPEECH 12 s. *Oral Reading* (1)—One lecture.
Continuation of Speech 11 f.

SPEECH 13 f. *Advanced Oral Reading* (1)—One lecture. Prerequisite, Speech 11 f or 12 s or the equivalent (if work is entirely satisfactory).

Advanced work in oral interpretation.

SPEECH 14 s. *Advanced Oral Reading* (1)—One lecture. Prerequisite, Speech 11 f or 12 s (if work is entirely satisfactory) or the equivalent.

Continuation of Speech 13 f.

SPEECH 15 f. *Special Advanced Speaking* (2)—Two lectures.

Class is organized as a Civic Club, and the work consists of such activities as are incident to such an organization—parliamentary law, committee work, prepared and impromptu speeches, etc.

Primarily for students in the College of Education.

SPEECH 16 s. *Special Advanced Speaking* (2)—Two lectures.
Continuation of Speech 15 f.

ZOOLOGY

PROFESSORS PIERSON, TRUITT; ASSISTANT PROFESSOR PHILLIPS;
MR. BURHOE, DR. NEWCOMBE

ZOOL. 1 f or s. *General Zoology* (4)—Two lectures, two laboratories.

An introductory course, which is cultural and practical in its aim. It deals with the basic principles of animal development, structure, relationships, and activities, a knowledge of which is valuable for a proper appreciation of the biological sciences. Typical invertebrates and the white rat, or other mammal, are studied.

ZOOL. 2 f or s. *Elements of Zoology* (3)—Two lectures, one demonstration.

A course for the student who desires a general knowledge of the principles underlying the growth, development, and behavior of certain animals, including man.

This course will be accepted for credit in fulfilling a major in zoology, if, later, supplemented by additional work.

ZOOL. 3 f. *Invertebrate Morphology* (4)—Two lectures, two laboratories. Required of students whose major is zoology, and of pre-medical students.

This course consists in a study of the comparative morphology of selected invertebrate groups.

ZOOL. 4 s. *Comparative Vertebrate Morphology* (4)—Two lectures, two laboratories.

A comparative study of selected organ systems in certain classes. Required of pre-medical students and those whose major is zoology.

ZOOL. 5 s. *Economic Zoology* (2)—Two lectures. Prerequisite, one course in zoology, and one course in botany.

The content of this course will center around the problems of preservation, conservation, control, and development of the economic wild life of Maryland. The lectures will be supplemented by assigned readings and reports.

This course, combined with Zool. 6 s, should form a part of the basic training for professional foresters, game proctors, and conservationists.

ZOOL. 6 s. *Field Zoology* (3)—One lecture, two laboratories. Prerequisite, one course in zoology and one in botany.

This course consists in collecting and studying both land and aquatic forms of nearby woods, fields, and streams, with emphasis upon insects and certain vertebrates, their breeding habits, environment, and economic importance. Intended for teachers of biology, and also for those who have an interest in nature study and outdoor life.

ZOOL. 12 f. *Animal Histology* (3)—One lecture, two laboratories. Prerequisite, one course in zoology.

A study of animal tissues and the technic involved in their preparation for microscopic examination.

ZOOL. 15 f. *Human Physiology* (3)—Two lectures, one laboratory.

For students who desire a knowledge of human anatomy and physiology. Emphasis is placed upon the physiology of digestion, circulation, respiration, and reproduction.

ZOOL. 16 s. *Human Physiology* (3)—Two lectures, one laboratory.

Similar to Zool. 15 f. Primarily for home economics students.

ZOOL. 20 s. *Vertebrate Embryology* (3)—One lecture, two laboratories. Prerequisite, one course in zoology. Limited to thirty students. Consent of instructor must be obtained before registering. Required of students whose major is zoology.

The development of the chick to the end of the fourth day.

Advanced Undergraduates and Graduates

ZOOL. 100 f. *Comparative Embryology* (3)—Two lectures, one laboratory. Permission of instructor must be obtained before registration.

A study of types of cleavage, methods of germ layer and organ differentiation of animals representative of the different phyla, with special reference to the invertebrates. (Not given in 1936-1937.) (Burhoe.)

ZOOL. 101 f; 102 s. *Mammalian Anatomy* (2-6)—Laboratory. Registration limited. Permission of the instructor must be obtained before registration.

A course in the dissection of the cat or other mammal. Recommended for pre-medical students, for those whose major is zoology, and for prospective teachers of science in high schools. (Pierson.)

ZOOL. 103 f; 104 s. *General Animal Physiology* (3-6)—Two lectures, one laboratory. Prerequisites, one year of chemistry and one course in vertebrate anatomy. Registration limited to twelve, and permission of instructor must be obtained before registration.

The first semester work deals with the principles of cellular and general physiology; the second semester is devoted to an application of these principles to the higher animals. (Phillips.)

ZOOL. 105 y. *Aquiculture* (4)—One lecture, one laboratory. Prerequisite, one course in zoology.

A comprehensive consideration of the properties of natural waters which render them suitable for animal environments. (Truitt.)

ZOOL. 106 f; 107 s. *Journal Club* (1-2).

Reviews, reports, and discussions of current literature. Required of all students whose major is zoology. (Staff.)

ZOOL. 108 f. *Invertebrate Zoology* (3)—Two lectures; one laboratory. Prerequisite, Zool. 3 f. Required of students whose major is zoology.

Taxonomy and distribution, with special reference to local fauna. (Newcombe.)

ZOOL. 109 s. *Vertebrate Zoology* (3)—Two lectures, one laboratory. Prerequisite, Zool. 4 s. Required of students whose major is zoology.

Classification, geological distribution, and environmental relations, with special reference to local fauna. (Newcombe.)

ZOOL. 111 f; 112 s. *Human Osteology* (2-6)—A laboratory course. Registration limited. Permission of the instructor must be obtained before registration.

A descriptive study of the human skeleton. (Pierson.)

ZOOL. 120 f. *Animal Genetics* (3)—Two lectures, one laboratory. Permission of the instructor must be obtained before registration.

An introductory course, designed to acquaint the student with the fundamental principles of heredity and variation. While primarily of interest to students of biology, it will be of value to those interested in the humanities. Required of students in zoology who do not have credit for Gen. 101 f. (After 1936-1937 this course will be given the second semester.) (Burhoe.)

ZOOL. 125 f and s. *Practice Teaching* (2)—Assisting in laboratory instruction under the direction of the regular instructors. Open only to those taking the pre-medical curriculum and to seniors whose major is zoology. The permission of the head of the department must be obtained before registering for this course. Registration limited. (Staff.)

For Graduates

ZOOL. 200 y. *Marine Zoology* (6)—One lecture; two laboratories. Problems in salt water animal life of the higher phyla. (Truitt.)

ZOOL. 201 y. *Advanced Vertebrate Morphology* (6)—One lecture; two laboratories.

Comparative morphology of selected organ systems of the important vertebrate classes. (Pierson.)

ZOOL. 202 y. *Advanced Animal Ecology* (6)—One lecture; two laboratories.

Animal populations, their distribution, behavior, and environmental relations. (Newcombe.)

ZOOL. 204 y. *Advanced Animal Physiology* (6)—One lecture; two laboratories.

Analysis of certain phases of the physiology of activities of animals. (Phillips.)

ZOOL. 205 y. *Biology of Marine Organisms* (6)—One lecture; two laboratories.

Biotic, physical, and chemical factors of the marine environment, including certain fundamental principles of oceanography. Special reference is made to the Chesapeake Bay region. (Newcombe and Phillips.)

ZOOL. 206 y. *Research*—Credit to be arranged. (Staff.)

CHESAPEAKE BIOLOGICAL LABORATORY

This laboratory, located in the center of the Chesapeake Bay country, is on Solomons Island, Maryland. It is sponsored by the University in co-operation with the Maryland Conservation Department, Goucher College, Washington College, Johns Hopkins University, Western Maryland College, and the Carnegie Institution of Washington, in order to afford a center for wild life research and study where facts tending toward a fuller appreciation of nature may be gathered and disseminated. The program projects a comprehensive survey of the biota of the Chesapeake region.

The laboratory is open from June until September, inclusive; and during the summer of 1936 courses will be offered in the following subjects: Algology, Animal Ecology, Physiology, Invertebrates, Diatoms, Economic Zoology, Invertebrate Zoology, Biological Problems.

These courses, of three credit hours each, are for advanced undergraduates and graduates. They cover a period of six weeks. Not more than two courses may be taken by a student, who must meet the requirements of the Department of Zoology as well as those of the Laboratory before matriculation. Each class is limited to five matriculants. Students working on special research problems may establish residence for the entire summer period.

Laboratory facilities, boats of various types fully equipped (pumps, nets, dredges, and other apparatus), and shallow water collecting devices are available for the work without extra cost to the student.

For full information consult special announcement, which may be obtained by applying to R. V. Truitt, Director, College Park, Maryland.

SECTION IV

DEGREES, HONORS, STUDENT REGISTER

DEGREES CONFERRED, 1934-1935

HONORARY DEGREE

HARRY WHINNA NICE, Doctor of Laws

HONORARY CERTIFICATES OF MERIT

CHARLES EGBERT BRYAN

RAY NORMAN

HARRY HOPKINS NUTTLE

THE GRADUATE SCHOOL

Doctor of Philosophy

LYLE THOMAS ALEXANDER
B.S. University of Arkansas, 1928

Dissertation:
"Vapor Pressure Relations of Certain Typical Soil Colloids."

ARTHUR DONALD BOWERS
B.S. University of Maryland, 1931
M.S. University of Maryland, 1932

Dissertation:
"The Mercury Weight Coulometer."

ORSON NORTHROP EATON
B.S. Cornell University, 1917
M.S. University of Maryland, 1923

Dissertation:
"An Anatomical and Chemical Study of Inbred and Crossbred Strains of Guinea Pigs."

RAYMOND ANDERSON FISHER
B.S. University of British Columbia, 1922
M.S. University of Maryland, 1932

Dissertation:
"The Colorimetric Determination of the Forms of Inorganic Phosphorus in Soils."

SAMUEL WILLIAM GOLDSTEIN
B.S. in Pharmacy, University of Maryland, 1929
M.S. University of Maryland, 1931

Dissertation:
"A Phytochemical and Pharmacological Study of *Phytolacca Americana* Linné."

FREDERICK VAHLCAMP GRAU
B.S. University of Nebraska, 1931
M.S. University of Maryland, 1933

Dissertation:
"Factors Affecting Pasture Quality. An Inventory of Soils, Vegetation and Management of Maryland Permanent Pastures."

ELMER WILLIAM GREVE
B.S. Ohio State University, 1930
M.S. Ohio State University, 1932

Dissertation:
"Some Responses of the Howard 17 Strawberry Plant to Applications of Nitrogen and Moisture in the Non-Fruiting and Fruiting Year."

MARCUS RANKIN HATFIELD
B.S. University of Maryland, 1931
M.S. University of Maryland, 1932

Dissertation:
"The Standard Electrode Potential of Lead."

ROBERT JACOBSEN
A.B. Doane College, 1930
M.A. George Washington University, 1931

Dissertation:
"The Isolation of Friedelin and Cerin from Cork and A Study of the Properties and Molecular Weight of Friedelin."

JOHN RICHARD KING
A. B. Indiana University, 1931
M.S. University of Maryland, 1932

Dissertation:
"Cytological Studies in the Genus *Ipomoea* and Related Genera."

DAVID VICTOR LUMSDEN
B.S. Cornell University, 1921
M.S. University of Maryland, 1932

Dissertation:
"Anatomical and Biochemical Changes in Narcissus Bulbs during Summer Storage at Various Temperatures."

L. LAVAN MANCHEY
B.S. in Pharmacy, University of Maryland, 1929
M.S. University of Maryland, 1931

Dissertation:
"Relation of the Carbonyl Group to Vermicidal Activity."

EARLE DWIGHT MATTHEWS
B.S. University of Florida, 1931
M.S. University of Maryland, 1932

Dissertation:
"A Biochemical Study of Soil Organic Matter as Related to Brown Root Rot of Tobacco."

EMMA JANET McDONALD
A.B. Lawrence College, 1924
M.A. University of Illinois, 1926

Dissertation:
"Diffructose Anhydrides from Hydrolyzed Inulin. The Structure of Diffructose Anhydride III."

J. HARVEY ROBERTS
B.S. University of Wisconsin, 1929
M.S. University of Maryland, 1931

Dissertation:
"Evidence of the Taxonomic Relations of the *Trichoptera* Based on a Study of the Skeletal Musculature."

STERL AMOS SHRADER
B.S. West Virginia Wesleyan College, 1931
M.S. University of Maryland, 1933

Dissertation:
"Some Functional Derivatives of Friedelin and Cerin."

EMANUEL VERITUS SHULMAN
B.S. in Pharmacy, University of
Maryland, 1929
M.S. University of Maryland, 1931

Dissertation:
"The Anatomy of the Transition
Zone of Some Species of *Passiflora*
and the Pharmacognostic Anatomy
of *Passiflora Incarnata* L."

FRANK J. SLAMA
B.S. in Pharmacy, University of
Maryland, 1928
M.S. University of Maryland, 1930

Dissertation:
"A Comparative Study of Maryland
Sennas."

FLETCHER PEARRE VEITCH, JR.
B.S. University of Maryland, 1931
M.S. University of Maryland, 1933

Dissertation:
"A Study of the Action of Sulfuric
Acid on Secondary Butyl Alcohol."

EDGAR PERKINS WALLS
B.S. Maryland College of Agricul-
ture, 1903
M.S. Maryland College of Agricul-
ture, 1905

Dissertation:
"The Vascular Anatomy of the
Floral Parts of Some Solanaceous
Plants."

JOSEPH CLARK WHITE
B.S. West Virginia Wesleyan Col-
lege, 1930
M.S. University of Maryland, 1933

Dissertation:
"The Activity of Tin in Tin Amal-
gams and the Standard Electrode
Potential of Tin."

Master of Arts

ROLFE LYMAN ALLEN
GRACE BARNES
KATHARINE STICKNEY BLISS
LILA MARIE BLITCH
ADONIRAM JUDSON BOLIN
STANLEY DOWDELL BROWN
WILLIAM HENDERSON CARPENTER
ELMER KIRK CHANDLEE
WILBUR DEVILBISS
DANIEL ROBERT EDWARDS
HELEN FARRINGTON
JOSEPH GLENN GOULD
FREDERIC FERN HARVER

HOWARD E. METCALFE
FRED LOTHAR MILLER
WILBUR CHURCHILL NICOLS
HAROLD ZEIGLER REBER
GERALD EMIL RICHTER
LOUISE TALITHA SAYLOR
F. ALFONS SCHUTTE
CATHERINE LEE TER VEER
JAMES RITTENHOUSE ULLRICH
AGATHA MCDOWELL VARELA
CATHERINE THERESA WOLD
NAOMI SHERMAN YATES

Master of Science

KEITH GILBERT ACKER
JOHN ROBERT ADAMS, JR.
RIDGELY B. BOND
CHARLES FREDERICK BRUENING
DONALD WHITEHEAD CHAPPELL

HAROLD E. CROWTHER
DAVID EDWARD DERR
WILLIAM E. HAUVER, JR.
WILLIAM APPLER HORNE
FLOYD B. HORNIBROOK

MARY ELIZABETH KLINGER
HERBERT LAPINSKY
LEWIS PAUL MCCANN
RUSSELL KENT MEAD
CLINTON MARION MECHAM
PAUL ANDREW PARENT
WILLIAM FRANKLIN REINDOLLAR
RALPH WALKER RUBLE

ALMA WILLIS RUTLEDGE
CLIFFORD SCHARFF SCHOPMEYER
LOUIS LAZAR SHERMAN
MINNA ELAINE STRASBURGER
ALBERT HOLMES TILLSON
EVERETT C. WEITZELL
LLEWELLYN HOPKINS WELSH
SOL WILNER

COLLEGE OF AGRICULTURE

Bachelor of Science

DONALD F. ASHTON
LAURENCE RAY BOWER
JAMES WILSON BROWN
EDWARD LLOYD BUNCH
KENNETH LEE CASKEY
WILLIAM HENRY CHILCOAT
CHARLES EDWIN CLARK
CHARLES HORNBERGER CLARK
*JAMES FRANCIS CROTTY
*CHARLES HENRY CUNNINGHAM
WILSON FRANCIS DAWSON
FRED CHALIS DOWNEY
RALPH CONRAD FISHER
MERRILL B. FULLERTON
CLIFFORD L. GROSS
HENRY GEORGE HARNS
WARREN WILLIAM HASTINGS
TRUMAN A. HOBBS
JOHN LEISTER HULL
WALTER F. JEFFERS
OMAR JAMES JONES, JR.
ARTHUR SPALDING KIDWELL

JEANETTE BAKER KITWELL
ROY W. LENNARTSON
ALFRED WILLIAM LEWIS
PAUL H. LUNG
CECIL ARTHUR MARSHALL
NICHOLAS BOSLEY MERRYMAN
WILMER SMITH NOBLE, JR.
NORMAN BEALL PFEIFFER
STEPHEN HEATH PHYSIOC
PAUL ROUTZAHN POFFENBERGER
*EDWARD WILLIAM SEBOLD
JOHN AUSTEN SILKMAN
HUTTON DAVISON SLADE
MARVIN LUTHER SPECK
JOSEPH LEWIS STALEY
DANIEL BOYER STONER
RAMSAY BERRY THOMAS
WARREN EDWARD TYDINGS
JOHN WESLEY WEBSTER
MARIE ELIZABETH WENZEL
DONALD BRYAN WILLIAMS
*ERNEST ELMER WOODEN, JR.

COLLEGE OF ARTS AND SCIENCES

Bachelor of Arts

ROBERT HARRIS ARCHER, JR.
HUBERT KENNARD ARNOLD
JOHN CLAYTON ASHTON
WILLIAM EUGENE BOUNDS
JOHN JOSEPH BOURKE, JR.
WILLIAM HAMPTON BRADY
*STANLEY DOWDELL BROWN

EVELYN ROSE BRUMBAUGH
THOMAS W. CAMPBELL
MARTHA ATKINSON CANNON
HARVEY JACKSON CHESTON, JR.
EDWARD LOUIS CHILES
PETER NICHOLAS CHUMBRIS
RICHARD WALLER COOPER

*Degree conferred September, 1934.

THOMAS PARKER CORWIN
 RICHARD EDMUND CULLEN
 *JOHN MAXWELL DICKEY
 LILLIAN DRAKE
 THADDEUS RONSAVILLE DULIN
 *EARL LESTER EDWARDS
 LEA KATHRYN ENGEL
 JEAN FERGUSON
 ROBERT J. GRAVES
 KATHLEEN RENTON HANNIGAN
 JOSEPH IRVING HERMAN
 STANLEY MORTON HOLLINS
 PAUL EDWARD HOLMES
 GAZA K. HORVATH
 MARGARET ELIZABETH JONES
 *THOMAS WEBB JONES, JR.
 EUGENE LEONARD KRESSIN
 JAMES FRANK LANE, JR.
 SAUL R. LASKY
 BARBARA MARTHA LEE
 GILBERT RALPH LEE
 ALFRED MILTON LOIZEAUX
 ELOISE GENEVIEVE LONG
 RUTH LORD
 EUGENE THOMAS LYDDANE
 JOSEPH MARSHALL MATHIAS
 AMOS I. MEYERS
 *JOHN EDWARD MONK
 RICHARD DAVIS MUMFORD
 WILLIAM C. H. NEEDHAM
 GRACE LOIS NELSON

EDWARD ARTHUR NEWMAN, JR.
 DONALD EDWIN PECK
 ROBERT ARTHUR PECK
 *ROBERT RAYMOND PITTS
 VIRGINIA LAWRENCE POTTS
 HERBERT M. PRATT
 CHARLES KIEFFER RITTENHOUSE
 HERBERT H. ROSENBAUM
 JOHN ALVIN RUEHLE
 JEROME C. SALGANIK
 HENRY KARL T. SCHAAF
 FRANCES ANITA SCHROTT
 *ANN BAKER SHAW
 JOHN GILLILAND SIMPSON
 JOHN ROBINSON SMALL
 TALBERT ALOYSIUS SMITH
 PETER SMYRNAS
 MARY LESLIE STALLINGS
 MARION PENNINGTON SUTTON
 *HOMER E. TABLER
 WALTER NOBLE TALKES
 EMERY WELLS THOMPSON
 CHARLES DAVID WANTZ
 JOHN WARHOL, JR.
 WILLIAM BERNARD WEIRICH
 BETTINA MAE WEIST
 BERMA J. WEST
 JUNE ELEANOR WILCOXON
 MARY ALICE WORTHEN
 VERA MARGARITE ZIMMERMANN
 JOHN H. ZIRCKEL

Bachelor of Science

HERBERT MONROE ALLISON
 *RICHARD PAUL ANDERSON
 WILLARD APPLEFELD
 WILLIS HARFORD BALDWIN
 PAUL L. BEACH
 HAROLD BERNSTEIN
 MORRIS BLOOM
 GILBERT BERNARD BLUMBERG
 MAYNE REID COE, JR.
 SANFORD COHN
 *ADA LYTHER CONKLIN
 JOSEPH VINCENT CRECCA
 CHESTER BURTON CROSS

*EVERETT SCHNEPPE DIGGS
 HERMAN DUBNOFF
 DAVID EDELSON
 *JOSEPH TEVYA ELVOVE
 ROBERT HALL FLANDERS
 MARTIN ABNER FRIEDMAN
 SOLOMON HERMAN GARTER
 HILLMAN CORNELIOUS HARRIS
 CHARLES EDWARD HERRING, JR.
 WOODROW WHITE JONES
 ARTHUR EDWARD KAHN
 JEROME HAROLD KAYE
 WILLIAM BRADFORD LANHAM, JR.

*Degree conferred September, 1934.

MAX LIPSITZ
 EDWIN MACHKOWSKY
 *IRENE THELMA MARINO
 JASON ERNEST MATTHEWS, JR.
 MARY LOUISE MILLER
 RICHARD WAGENER OCKERSHAUSEN
 JAMES WILLIAM PIKE
 ARTHUR JEROME RICH
 *LOUIS MILTON RIEHL
 JOHN RIZZOLO
 SAMUEL ROCHBERG
 HENRY ROTHKOPF

RUTH MILDRED ROUSH
 JOHN A. RUPPERT
 RALPH A. SHULMAN
 GEORGE TARTIKOFF
 BERNARD O. THOMAS, JR.
 WINFIELD LYNN THOMPSON
 PETER JOHN VALAER, III
 JOHN VIGNAU
 HERMAN WARSHAFSKY
 SAMUEL COTTRELL WHITE
 RALPH CHARLES WILLIAMS
 FRANKLIN BRATT WISE

SCHOOL OF DENTISTRY

Doctor of Dental Surgery

PHILIP WARREN ANDERSON
 JOHN ANGALONE
 SAMUEL BECKENSTEIN
 WILLIAM ALLEN BEETHAM
 JOSEPH BENJAMIN BERKE
 HENRY CHANDLER BERNARD
 PASQUEL JOHN BISESE
 JOSEPH HEATWOLE BLACK
 HARRIS BLAKE
 JOHN CLARENCE BODNAR
 WILLIAM BOYARSKY
 DONALD FREDERICK BRADSHAW
 STANLEY J. BRIDGES
 J. THEODORE CALDWELL
 RICHARD ERNEST COFRANCESCO
 LOUIS FRANK COROSO
 WILLIAM BENJAMIN COSTENBADER
 ROBERT JAMES CRAIG
 GERALD PRESTON CROSS
 FREDERICK JAMES CUDDY
 EMIL LOUIS CURCIO
 EDWARD JAY DEKONING
 ANTHONY DOMENIC DENOIA
 *ERNESTO DAVILA DIAZ
 THOMAS VAN DONOHUE
 STANLEY HYDE DOSH
 WILLIAM STEPHEN ERAMO
 KENNETH DAVID EYE
 HARRY WALLACE FALLOWFIELD, JR.
 MILTON LOUIS FEUER

MICHAEL JAMES FLANNERY
 GERSON ARMAND FREEDMAN
 JULIUS WILLIAM FRIEDMAN
 *ABRAHAM GLICK
 EUGENE ASHTON GOLDBERG
 MORRIS GOLDSTEIN
 CASIMIR FRANCIS GOLUBIEWSKI
 JOHN WILLIAM GOURLEY
 NATHAN GROSSMAN
 AARON GUTH
 THOMAS GRANT HARTLEY
 CLIFFORD OWEN HILLS
 S. EDMUND HOEHN
 JOHN JOSEPH HOULIHAN
 JACK ISADOR INGBER
 ARTHUR JORJORIAN
 BENJAMIN KAYNE
 TAFFY THEODORE KOBRINSKY
 DONALD KRULEWITZ
 WILLIAM LERNER
 ADOLPH THOMAS LEVICKAS
 ISADORE LEVINSON
 JOHN PATRICK MAHONEY
 AARON BURTON MARKOWITZ
 VERNON BRENSLEY MARQUEZ
 LEO HERBERT MINKOFF
 SAMUEL MORRIS
 JOHN BENJAMIN MORRISSEY
 WILLIAM WOODS NOEL
 FREDERICK JOSEPH PARMESANO

*Degree conferred September, 1934.

ANGELO' PASQUAL PENTE
 RAYMOND EDWARD PHILLIPS
 FRANK REBER PITTMAN
 CHARLES TAYLOR PRIDGEON
 ELMER RIVKIN
 RAFAEL ESCALONA ROBERT
 MILTON LOUIS ROBINSON
 JULIAN FRANCIS ROSIAK
 MORRIS ELLIS RUBIN
 STANLEY ANTHONY RZASA
 FRANCIS AMBROSE SAUER
 JOSEPH HENRY SCANLON, JR.
 ALFRED HUGO SCHILLING

GERALD SHOEN
 MARCY LEE SHULMAN
 ISADORE LEE SINGER
 MAURICE SKOBLOW
 HANSEL HEDRICK SNIDER
 LOUIS SOBER
 RICHARD ALPHONSE SOJA
 RICHARD ANDREWS STEVENS
 HARVEY BENJAMIN STONE
 BRAINERD FOSTER SWAIN
 EDWARD WALLACE WALLWORK
 JOHN HARRY WHITAKER
 DEWITT CREECH WOODALL

COLLEGE OF EDUCATION

Bachelor of Arts

| | |
|----------------------------------|-----------------------------|
| JEAN RUTH ASHMUN | *ROBERT WILSON JONES |
| CHARLES ROBERT BOUCHER | HELEN FRANCES KLINGSOHR |
| ELEANOR FAWCETT CISSEL | *JEANNETTE ELIZABETH LOVELL |
| GUY GRAHAM DENNIS | *JOHN F. MANLEY |
| MAUDE RUSSELL DUVALL | LEONA CARY MILLER |
| LOUISE KATHARINE ELIZABETH EYLER | FRANCES RICHEY |
| LOUISE ELLA MAE FENTON | RALPH WINDSOR RUFFNER |
| MARYBETH M. GARVEY | *CORA DODSON SASSCER |
| MARGARET HACKETT GIBSON | *JAMES EARL SOLT |
| JAMES BURNSIDE GRAHAM | JEAN LOWE SOMERVILLE |
| JEAN GRACE HAMILTON | *MILDRED DELLA WALK |
| CLARK HEIRONIMUS | GENEVIEVE ASENATH YONKERS |

Bachelor of Science

| | |
|----------------------------|---------------------------|
| CONARD B. ALLISON | RUTH AMANDA JEHL |
| MAURINE ALLISON | MARY LEE LANKFORD |
| ELINOR MYRA BOYD | WILLARD MCKEEVER LAWALL |
| NELL CONNOR | *CARL MARSHALL MANN |
| *BEATRICE WOODFORD CROCKER | FREDERICK STEWART MCCAW |
| LAUREL MARION DEMERITT | EVELYN LAYTON NEAL |
| ALICE LEE DIX | WILLIAM SHERMAN O'BERRY |
| ELLEN FLORENCE ENSOR | DOROTHY LOUISE ORDWEIN |
| JAMES GLENN GRAHAM | LOUIS LESTER PISTEL |
| ROBERTA MARJORIE HANNUM | EDWARD FRANCIS QUINN, JR. |
| ELEANOR VIOLET HASSON | MARJORIE DORAN ROSENFELD |
| FRANK SHAWN HOFFECKER, JR. | ADOLPH SCHWARTZ |
| ELIZABETH VIRGINIA IJAMS | EDNA LOUISE WEIGEL |
| TEMPLE ROLPH JARRELL | EARL G. WIDMYER |

*Degrees conferred September, 1934.

Bachelor of Science

Industrial Education

*HENRY DOTERER BLAIR
 RAYMOND NELSON DONELSON
 SAMUEL GOLDSMITH
 EDWARD HERMAN GOLDSTEIN
 *WILLIAM HENRY JOLLY
 HARVEY CHESTER JONES

SAMUEL KRIVITSKY
 MILDRED CROWLEY MCCAGHEY
 *FRANCES MORELL MITCHELL
 JOHN WILLIAM MYERS
 AQUILLA JOSEPH PUMPHREY

Teachers' Diplomas

JEAN RUTH ASHMUN
 HAROLD BERNSTEIN
 ELINOR MYRA BOYD
 ANNA BETTI BUSCHMAN
 HARVEY JACKSON CHESTON, JR.
 ELEANOR FAWCETT CISSEL
 *BEATRICE WOODFORD CROCKER
 LAUREL MARION DEMERITT
 GUY GRAHAM DENNIS
 LOUISE KATHARINE ELIZABETH EYLER
 MARYBETH M. GARVEY
 JAMES GLENN GRAHAM
 JEAN GRACE HAMILTON
 ROBERTA MARJORIE HANNUM
 MARGARET FAWCETT HARDY
 ELEANOR VIOLET HASSON
 GAZA K. HORVATH
 SARAH GRIFFITH JACK
 FELICE EDITH JACOB
 RUTH AMANDA JEHL
 OMAR JAMES JONES, JR.
 HELEN FRANCES KLINGSOHR
 JAMES FRANK LANE, JR.
 MARY LEE LANKFORD
 WILLARD MCKEEVER LAWALL

*Awarded September, 1934.

ROBERT ANTHONY LITTLEFORD
 ERNESTINE MARIE LOEFFLER
 FREDERICK STEWART MCCAW
 LEONA CARY MILLER
 JULIA ANN NORMAN
 DOROTHY LOUISE ORDWEIN
 LOUIS LESTER PISTEL
 PAUL ROUTZAHN POFFENBERGER
 FRANCES RICHEY
 MARJORIE DORAN ROSENFELD
 RALPH WALKER RUBLE
 RALPH WINDSOR RUFFNER
 F. ALFONS SCHUTTE
 *EDWARD WILLIAM SEBOLD
 *SARA LOUISE SHORT
 FLORENCE TUCKER SIMONDS
 JOHN ROBINSON SMALL
 AGNES PRISCILLA SOPER
 HAZEL MAE SPEICHER
 MARY LESLIE STALLINGS
 EDNA LOUISE WEIGEL
 EARL G. WIDMYER
 HELEN ELISE WOLLMAN
 MARY ALICE WORTHEN
 GENEVIEVE ASENATH YONKERS

COLLEGE OF ENGINEERING

Civil Engineer

CHARLES FRANCIS CASHELL
 JOHN THOMAS O'NEILL
 JOHN HERBERT MITTON

Electrical Engineer

FRANK THEODORE CHESNUT

Mechanical Engineer

ROBERT L. EVANS

Bachelor of Science

| | |
|-----------------------------|------------------------------|
| KARL FERGUSON BALDWIN, JR. | RICHARD BENNETT KNIGHT |
| EDWARD SEWELL BARBER | WILLIAM MARTIN KOENIG |
| *JAMES CARROLL BEATTY | RICHARD FRANCIS LANE |
| ALFRED RAYMOND BOLZ | *EDWIN HUBBARD LAWTON |
| PAUL SAMUEL BOWERS | CLINTON GEORGE LIGHT, JR. |
| CHARLES DAVID BRIDDELL, JR. | JOHN ARTHUR LOGAN |
| SAMUEL HOWARD BROOKS | CONSTANTINE LOZUPONE |
| HAROLD JOSEPH BURNS | CHARLES HERBERT LUDWIG |
| JAMES ALAN CAMPBELL | FIELDING LEWIS MITCHELL |
| RAY FRANCIS CHAPMAN | JULIUS EDWARD MORCOCK, JR. |
| HENRY M. CHICK | CHARLES HERBERT MORRIS |
| TRACY CARLISLE COLEMAN | MILTON CHRISTIAN PEPPER |
| JOHN HARRISON COSTINETT | GEORGE S. PERATINO |
| DENZEL EVERETT DAVIS | ROBERT RICHARDSON POOLE |
| EDWIN AUSTIN DAVIS | OLAF S. PRUSS |
| ROBERT ANTHONY DUNNIGAN | JOSEPH HENRY PYLES |
| MARLAND W. DUVALL | EDWARD PRESTON RAHE |
| *JOHN CLINTON DYE | ALBERT WILLIAM ROSENBERGER |
| CHARLES TAGE FOLTZ | CLINTON GAY SKIDMORE |
| DANIEL M. FOLTZ | JOHN ROGER SMITH |
| JOHN MICHAEL GANGLER | ALLAN MORTEN THOMAS, JR. |
| JULIUS LOUIS GOLDMAN | LEVY RHAME TINDAL |
| CARL SPRINGMANN GREGORY | FRANKLIN LEROY WALKER |
| CHARLES GARDNER GROSH | JULIAN FAIRFAX WALTERS, JR. |
| WILLIAM ALEXANDER HARMON | PELHAM ALDEN WALTON |
| *DONALD ALBERT HAY | THOMAS HOLLIDAY WEBSTER, III |
| JOHN ALAN HEROLD | *HARMON CRANE WELCH |
| HARRY HYLAND HOWARD, JR. | LEE WILLIAMS |
| EDWARD KAMINSKI | THOMAS LOGAN WOLARD |
| ALBERT KANODE | CHARLES HARDING ZIMMISCH |
| JOHN M. KEMPER, JR. | |

COLLEGE OF HOME ECONOMICS

Bachelor of Science

| | |
|-------------------------|------------------------|
| MILDRED LOWNDES BERRY | EMMA CARROLL GIBBS |
| ELIZABETH BINSWANGER | LENNA LOUISA GROSS |
| RUTH ELIZABETH BURSLEM | MARGARET FAWCETT HARDY |
| ANNA BETTI BUSCHMAN | RUTH LEE HILL |
| BERTIE LOUISE CARUTHERS | NORMA RUTH HOAGE |
| MABEL ELIZABETH EWALD | SARAH GRIFFITH JACK |

*Degrees conferred September, 1934.

FELICE EDITH JACOB
ELIZABETH ROZELLE JOHNSON
MARGARET ESTELLE LANGRALL
ERNESTINE MARIE LOEFFLER
KATHRYN MELISSA MOORE
JULIA ANN NORMAN
DOROTHY O. PIERCE

AGNES PRISCILLA SOPER
HAZEL MAE SPEICHER
ESTELLE STANLEY
MARIAN PALMER WHITE
HELEN ELISE WOLLMAN
ANITA BLANCHE WRIGHT

SCHOOL OF LAW

Bachelor of Law

CHARLES BATES BARKER
RICHARD MCCORMICK CARLIN
PETER JOHN CARPENTI
†THOMAS WEST CLAGGETT, JR.
FRANCIS IRWIN COCKRELL
†GEORGE HOWARD DOWELL
WILBUR R. DULIN
BENJAMIN FRANCIS EPSTEIN
JOSEPH GREGORY FINNERTY
JOHN ROYDEN FORSYTHE
†LOUIS GETZ
ROBERT LEE GILL, JR.
WINSON GILBERT GOTT, JR.
WALTER RECKORD HAILE
†THOMAS HUGHLETT HENRY, JR.
FREDERICK WILLIAM INVERNIZZI
LAURANCE JONES, JR.
FRANCIS L. KENNEY, JR.
†THOMAS JAMES KENNEY
THOMAS HENRY KERLIN
LOUIS BEHR KRAVETZ
†JOHN BERNARD LOTZ, JR.

PHILIP LEE LOTZ
†EDWIN WILLIAM LOWE
FRANCIS XAVIER MCCORMICK
*JOSEPH RIEMAN MCINTOSH
DANIEL MILLER
WALTER CHARLES MYLANDER, JR.
ZADOC TOWNSEND PARKS, JR.
ROBERT CAREY REEDER, JR.
JOHN HENRY RITZ
GEORGE GRIFFIN RUDOLPH
†JOHN LOWRY SANFORD, JR.
ERNEST ALLEN SCHILPP
ROBERT LEE SMITH
STEWART LEE SMITH
DAVID SAMUEL SYKES
GERALD EDWARD TOPPER
DAVID TITUS WOODWARD VAUTHIER
FRANK CHARLES WACHTER
†WILLIAM ERNEST WELLMANN, JR.
THOMAS HAMMOND WELSH, JR.
ROBERT E. WIGGINTON
†EDMUND FARLEY YOCUM

Certificate of Proficiency

THOMAS HUNT MAYFIELD, JR.

COLUMBUS KNIGHT OAKLEY

SCHOOL OF MEDICINE

Doctor of Medicine

MILTON HARRIS ADELMAN
JOHN WARREN ALBRITAIN
EDWARD JAMES ALESSI
MIGUEL ALONSO
GEORGE ALPERT

JOHN BASCOM ANDERSON
MELVIN RAUCH AUNGST
HENRY EUGENE BARNES, JR.
DOMINIC THOMAS BATTAGLIA
DAN GEORGE BIERER

†With honor.

*Degree conferred September, 1934.

CHARLES ALOYSIUS BOCK
 GEORGE HECTOR BROUILLET
 JAMES PETTIGREW BUNN, JR.
 WILLIAM ADRIAN CASSIDY
 ERNEST IVON CORNBROOKS, JR.
 EDWARD FRANCIS COTTER
 FRANK HENRY CUTLER
 FRANCIS GEORGE DICKEY
 EARL HENRY DIEHL
 DOUGLAS RUDE DODGE
 ALEXANDER ANDREW DOERNER
 ROBERT LIONEL DUBOIS
 WILLIAM CHARLES DUNNIGAN
 SAMUEL EDWARD EINHORN
 AUGUST LUDWIG EWALD, JR.
 FERDINAND FADER
 IRVING FREEMAN
 ROBERT PEARSON FRUCHTBAUM
 PHILIP JACOB GALITZ
 WALTER HENRY GERWIG, JR.
 JOHN RANDOLPH GODBEY
 WILLIAM HOWARD GRENZER
 JOSEPH BERNARD GROSS
 GERARD PAUL HAMMILL
 JOHN CARL HAMRICK
 AARON HARRIS
 IRA FRANKLIN HARTMAN
 JEANNETTE ROSALINE EISEN-
 BRANDT HEGHINIAN
 WILLIAM GOLDSBOROUGH HELFRICH
 JAMES KENNEDY HERALD
 LEWIS CHARLES HERROLD
 ARTHUR HOLLANDER
 JOHN HENRY HUGG
 JOSIAH ARNOLD HUNT
 WILLIAM PRITCHARD JORDAN
 AARON LOUIS KAMINSKY
 HARRY FRANCIS KANE
 MICHAEL LAWRENCE KELLER
 HAROLD HENRY KLEIN
 IRVING KLOMPUS
 FREDERICK EDWIN KNOWLES, JR.
 FRANK ARMENTO LAINO
 EDWIN CHARLES LANE
 CALEB RODNEY LAYTON

ARCHIE CLIFTON LEWIS
 WALTER LICHTENBERG
 SAUL LIEB
 LOUIS GRANDIN LLEWELYN
 DONALD CLAY MACLAUGHLIN
 CHARLES BERNARD MAREK
 HOWARD BROOKS MAYS
 OSCAR TRACY McDONOUGH, JR.
 ALPINE WATSON MCGREGOR
 LORENZO WATSON MCGREGOR
 DEARMOND JOHN MCHENRY
 KARL FREDERICK MECH
 LAWRENCE HOY MILLS
 BRUCE MONTGOMERY
 MILTON ALEXANDER NOON, JR.
 PHILIP OWEN
 ANTHONY JAMES PEPE
 WILLIAM RAFFEL
 CHARLES HENRY REIER
 DAVID P. ROBERTS
 HARRY MAXIMILIAN ROBINSON, JR.
 MILTON IRVING ROBINSON
 FRANK TIPTON ROGERS
 ISRAEL ROSEN
 SOL ROSEN
 HAROLD WILLIAM ROSENBERG
 *NATHAN RUDO
 JOHN CARROLL RUSSELL
 MILTON SCHLACHMAN
 GEORGE FREDRICK SCHMITT, JR.
 PAUL SCHONFELD
 JOSEPH SHAPIRO
 SYDNEY HAROLD SHAPIRO
 JOHN MELVIN SHAUL
 MILTON SISCOVICK
 LEO BROWN SKEEN
 VERNON EDWARD SPITZNAGLE
 BENJAMIN MAXWELL STEIN
 LOUIS TEITEL
 HARRY ALLEN TEITELBAUM
 JOSEPH JOEL TUBY
 LUTHER FRANKLIN VOZEL
 JULIUS MEYER WAGHELSTEIN
 JOHN McCULLEN WARREN
 JAMES BLOCK WHELESS

*Degree conferred September, 1934.

JESSE FRANK WILLIAMS, JR.
 CHARLES VERNON WILLIAMSON
 NORMAN JAMES WILSON

ALVIN EUGENE WILLIAM WODE
 EVERET HARDENBERGH WOOD
 LEWIS KLAIR WOODWARD, JR.

SCHOOL OF NURSING

Graduate in Nursing

THELMA ALICE BARDEN
 SARA KATHRYN BOWMAN
 YOLANDE WELLINGTON CHANEY
 HELEN CHELLUK
 MABEL JACKSON COLEY
 ALICE VERA ELCHENKO
 ETHEL IRENE EVANS
 THELMA GWALTNEY
 ELSIE AVLONA HAMILTON
 BEATRICE EDISON HODDINOTT
 ANN FRANCES HOKE
 MARGUERITE LOUISE KURTZ
 HELEN MARIE MILLER
 RITA VIRGINIA MILLER

ELIZABETH LEWIS NUNNELEE
 MARY POTTER
 RUTH R. PRICE
 DOROTHY ANNE RENCHER
 MARY GARNET RICHARDS
 MABEL PEARL ROTH
 RUTH MILDRED ROUSH
 JUNE RULLMAN
 MARIE HOPFIELD SHIMP
 EMMA VIRGINIA THOMPSON
 CLAUDIA MAXINE WHEELER
 DORIS VIRGINIA WHITEHURST
 LILLIAN LOUISE WILSON

SCHOOL OF PHARMACY

Graduate in Pharmacy

*BERNARD CARLTON COHEN
 JAMES HOLLY DRENNEN
 HANNAH EUZENT
 JULIUS WALTER FERET
 ABRAHAM LEONARD GLASS
 JEROME HONKOFKY
 *ISADORE HORWITZ
 BENJAMIN LEIBOWITZ
 ISRAEL LEVIN

*WILLIAM RANDOLPH LUMPKIN
 SISTER MARY ADAMAR MESS
 SALVATORE MOLINARI
 HARRY PRESSMAN
 SISTER MARY THEODOSIA PRUNER
 HAROLD STEEL
 MORRIS WALMAN
 *MICHAEL JAMES WARD

Bachelor of Science in Pharmacy

LOUIS BLITZ
 BERNARD CARLTON COHEN
 *LEO MICHAEL CZEKAJ
 LOUIS EUGENE DAILY
 ISAAC FROHMAN
 SIGMUND GOLDBERG
 WILLIAM GEORGE HEALEY, JR.
 ISADORE KAPLAN

IRVIN BERNARD KEMICK
 CATHARINE EVANS KIRK
 MARY ANNA MANDROW
 HARRIETT RUTH NOEL
 SAMUEL NOVEY
 ALEXANDER JOHN OGRINZ, JR.
 ISIDORE EARL PASS
 HARRY PROSTIC

*Degree conferred September, 1934.

ELTON RESNICK
SIDNEY SAFRAN
JACOB EDWARD SCHMIDT

MEYER ROBERT SHEAR
DOROTHY STAIN
ALBERT STEINER

HONORS, MEDALS, AND PRIZES, 1934-1935

Elected Members of Phi Kappa Phi, Honorary Fraternity

| | |
|-----------------------------|---------------------------|
| EDWARD SEWELL BARBER | HILLMAN CORNELIOUS HARRIS |
| ARTHUR DONALD BOWERS | TRUMAN A. HOBBS |
| EVELYN ROSE BRUMBAUGH | GAZA K. HORVATH |
| JAMES ALAN CAMPBELL | FELICE EDITH JACOB |
| BERTIE LOUISE CARUTHERS | ROBERT JACOBSEN |
| HARVEY JACKSON CHESTON, JR. | JOHN RICHARD KING |
| HENRY M. CHICK | RICHARD FRANCIS LANE |
| ELEANOR FAWCETT CISSEL | L. LAVAN MANCHEY |
| CHARLES HORNBERGER CLARK | RICHARD DAVIS MUMFORD |
| LAUREL MARION DEMERITT | ROBERT ARTHUR PECK |
| LOUISE ELLA MAE FENTON | EDWARD PRESTON RAHE |
| CHARLES GARDNER GROSH | SAMUEL ROCHBERG |
| LENNA LOUISA GROSS | HAZEL MAE SPEICHER |
| JEAN GRACE HAMILTON | MARY LESLIE STALLINGS |
| WILLIAM ALEXANDER HARMON | CHARLES DAVID WANTZ |
| HENRY GEORGE HARNS | EDGAR PERKINS WALLS |

Elected Members of Sigma Xi, Honorary Scientific Fraternity

| | |
|--------------------------|-----------------------------|
| LYLE THOMAS ALEXANDER | L. LAVAN MANCHEY |
| WILLIAM HENRY ANDERSON | EARLE DWIGHT MATTHEWS |
| MYRON HERBERT BERRY | EMMA JANET McDONALD |
| ARTHUR DONALD BOWERS | OLE ANKER NELSON |
| RAYMOND ANDERSON FISHER | JOHN JENKINS PARKS |
| SAMUEL WILLIAM GOLDSTEIN | STERL AMOS SHRADER |
| FREDERICK VAHL CAMP GRAU | FLETCHER PEARRE VEITCH, JR. |
| ELMER WILLIAM GREVE | EDGAR PERKINS WALLS |
| MARCUS RANKIN HATFIELD | JOSEPH CLARK WHITE |
| JOHN RICHARD KING | MARK WINTON WOODS |
| DAVID VICTOR LUMSDEN | |

Citizenship Medal, offered by Mr. H. C. Byrd, Class of 1908
WARREN EDWARD TYDINGS

Citizenship Prize, offered by Mrs. Albert F. Woods
ELIZABETH VIRGINIA IJAMS

Athletic Medal, offered by the Class of 1908
JOHN WILLIAM GUCKEYSON

Maryland Ring, offered by Charles L. Linhardt
ALBERT WALTER WEBB

Goddard Medal, offered by Mrs. Annie K. Goddard James
ANDREW BENNIE BEVERIDGE

Sigma Phi Sigma Freshman Medal
NORBERT FRANKENBERGER

Delta Delta Delta Sorority Medal
BERNICE GRODJESK

Medal and Junior Membership, offered by the American Institute of Chemists
HILLMAN CORNELIOUS HARRIS

Dinah Berman Memorial Medal, offered by Benjamin Berman
WILLIAM AUGUSTUS MCCOOL

Mortar Board Cup
JEAN GRACE HAMILTON

Awards in Recognition of the Greatest Contribution to Women's
Organizations

MARY LESLIE STALLINGS MARY ALICE WORTHEN

Phi Delta Epsilon Journalistic Fraternity Awards
JOSEPH MARSHALL MATHIAS WALTER GEORGE LOHR
HERBERT MONROE ALLISON

The Diamondback Medals
MARION ELIZABETH PARKER WILSON FRANCIS DAWSON
GEORGE LESLIE CROSSLEY PAUL ROUTZAHN POFFENBERGER
LEA KATHRYN ENGEL WALTER NOBLE TALKES

The Terrapin Medals
BETTY CLAIRE QUIRK GEORGE DAVID GARBER

The Old Line Medals
MARY LESLIE STALLINGS ROBERT GRANT LITSCHERT
JAMES GARDNER BROOKS FRANK PATRICK DUGGAN

Governor's Drill Cup
COMPANY B, COMMANDED BY CAPTAIN TALBERT ALOYSIUS SMITH

Military Faculty Award
CADET LIEUTENANT COLONEL JULIAN FAIRFAX WALTERS, JR.

Military Department Medals
CADET MAJOR THOMAS PARKER CORWIN CADET MAJOR EARL G. WIDMYER
CADET MAJOR FREDERICK STEWART McCAW

Military Medal, offered by the Class of 1899
CADET WELCH SMITH

Washington Chapter Alumni Military Cup
FIRST PLATOON, COMPANY G, COMMANDED BY
CADET FIRST LIEUTENANT PELHAM ALDEN WALTON

University of Maryland Prize (Saber), to the Best Company Commander
CADET CAPTAIN TALBERT ALOYSIUS SMITH

The Scabbard and Blade Saber, to Commander of Winning Platoon
CADET FIRST LIEUTENANT PELHAM ALDEN WALTON

The Military Department Freshman Medals
CADET GEORGE ALERED BOWMAN CADET WELCH SMITH
CADET NICHOLAS URBAN WAGNER

Gold Medals (Military Band)
CADET JOHN GIBSON WILSON, JR. CADET ALFRED EVERETT SAVAGE
CADET PRICE GODMAN PIQUETT

Squad Competition Gold Medals
CADET CORPORAL HOULDER HUDGINS CADET JAMES ALBERT CHAPPELEAR, JR.
CADET ROBERT OTTO HAMMERLUND
CADET HERMAN WILLIAM BERGER, JR. CADET MAX DAVID ZANKEL
CADET RICHARD CRANDALL BREADEN CADET PHILIP BROOKS FRANCK
CADET CHARLES HARVEY COOKE

Inter-Collegiate Third Corps Area Silver Medal
CADET ROBERT LEE MATTINGLY

Inter-Collegiate Third Corps Area Rifle Bronze Medal
CADET SERGEANT WILLIAM RANDOLPH SCHNEIDER

Military Department Gold Medal, University of Maryland Rifle Team
CADET CORPORAL RAYMOND DAVIS, JR.

Military Department Gold Medal, University of Maryland Freshman Rifle Team

CADET ROBERT LEE MATTINGLY

**WAR DEPARTMENT AWARDS OF COMMISSIONS AS
SECOND LIEUTENANTS**

The Infantry Reserve Corps

| | |
|---------------------------|-------------------------------|
| CHARLES ROBERT BOUCHER | FREDERICK STEWART McCAW |
| HAROLD JOSEPH BURNS | PHILIP LAWRENCE MOSSBURG, JR. |
| RAY FRANCIS CHAPMAN | RICHARD HARE NELSON |
| TRACY CARLISLE COLEMAN | JOSEPH HENRY PYLES |
| THOMAS PARKER CORWIN | ALBERT WILLIAM ROSENBERGER |
| JOSEPH VINCENT CRECCA | JOHN ALVIN RUEHLE |
| GUY GRAHAM DENNIS | RALPH WINDSOR RUFFNER |
| FRANK PATRICK DUGGAN | TALBERT ALOYSIUS SMITH |
| THADDEUS RONSAVILLE DULIN | WALTER NOBLE TALKES |
| ROBERT ANTHONY DUNNIGAN | PETER JOHN VALAER, III |
| JULIUS GOLDMAN | JULIAN FAIRFAX WALTERS, JR. |
| RAYMOND JENSEN GOODHART | PELHAM ALDEN WALTON |
| CHARLES GARDNER GROSH | CHARLES DAVID WANTZ |
| WILLIAM ALEXANDER HARMON | JOHN WESLEY WEBSTER |
| CHARLES HERBERT LUDWIG | EARL G. WIDMYER |

The National Guard of the United States

ROBERT HARRIS ARCHER, JR. RALPH CONRAD FISHER

HONORABLE MENTION

College of Agriculture

First Honors—CHARLES HORNBERGER CLARK, HENRY GEORGE HARNS, TRUMAN A. HOBBS, DONALD F. ASHTON.

Second Honors—MARVIN LUTHER SPECK, FRED CHALLIS DOWNEY, WARREN WILLIAM HASTINGS, HUTTON DAVISON SLADE.

College of Arts and Sciences

First Honors—EVELYN ROSE BRUMBAUGH, ROBERT ARTHUR PECK, HARVEY JACKSON CHESTON, JR., GRACE LOIS NELSON, HILLMAN CORNELIOUS HARRIS, GAZA K. HORVATH, MARY LESLIE STALLINGS, SAMUEL ROCHBERG, RICHARD DAVIS MUMFORD, CHARLES DAVID WANTZ, PETER JOHN VALAER, III, BERNARD O. THOMAS, JR.

Second Honors—KATHLEEN RENTON HANNIGAN, AMOS I. MEYERS, LEA KATHRYN ENGEL, JOSEPH VINCENT CRECCA, JAMES FRANK LANE, JR., DONALD EDWIN PECK, JOSEPH MARSHALL MATHIAS, HERBERT H. ROSENBAUM, MAX LIPSITZ, RICHARD WALLER COOPER, FRANCES ANITA SCHROTT.

College of Education

First Honors—JEAN GRACE HAMILTON, LAUREL MARION DEMERITT,
LOUISE ELLA MAE FENTON, ELEANOR FAWCETT CISSEL.
Second Honors—MAUDE RUSSELL DUVALL, JEAN RUTH ASHMUN, MARYBETH
GARVEY, HELEN FRANCES KLINGSOHR, MARGARET HACK-
ETT GIBSON.

College of Engineering

First Honors—EDWARD SEWELL BARBER, RICHARD FRANCIS LANE,
CHARLES GARDNER GROSH, WILLIAM ALEXANDER HAR-
MON, JAMES ALAN CAMPBELL, HENRY M. CHICK.
Second Honors—EDWARD PRESTON RAHE, JOHN MICHAEL GANGLER, CON-
STANTINE LOZUPONE, EDWARD KAMINSKI, JOHN M. KEM-
PER, JR.

College of Home Economics

First Honors—HAZEL MAE SPEICHER, LENNA LOUISA GROSS, FELICE EDITH
JACOB.
Second Honors—HELEN ELISE WOLLMAN, BERTIE LOUISE CARUTHERS.

School of Dentistry

University Gold Medal for Scholarship
EUGENE ASHTON GOLDBERG

Certificates of Honor

WILLIAM BENJAMIN COSTENBADER HANSEL HEDRICK SNIDER
KENNETH DAVID EYE S. EDMUND HOEHN
JOHN WILLIAM GOURLEY

School of Law

Prize of \$100.00 for the Highest Average Grade for the Entire Course,
Day School,
THOMAS WEST CLAGGETT, JR.

Prize of \$100.00 for the Highest Average Grade for the Entire Course,
Evening School,
EDWIN WILLIAM LOWE

Alumni Prize of \$50.00 for Best Argument in Honor Case in
the Practice Court,
THOMAS HUGHLETT HENRY, JR.

George O. Blome Prizes to Representatives on Honor Case in the Practice Court,

JOSEPH GREGORY FINNERTY FRANCIS XAVIER MCCORMICK
THOMAS HUGHLETT HENRY, JR. STEWART LEE SMITH

School of Medicine

University Prize—Gold Medal
GEORGE FREDRICK SCHMITT, JR.

Certificates of Honor

WALTER LICHTENBERG NORMAN JAMES WILSON
EDWARD FRANCIS COTTER JOHN WARREN ALBRITAIN
DOUGLAS RUDE DODGE

The Dr. A. Bradley Gaither Memorial Prize of \$25.00 for the Best Work in
Genito-Urinary Surgery During the Senior Year,
EDWARD FRANCIS COTTER

School of Nursing

The Janet Hale Memorial Scholarship Given by the University of Maryland
Nurses' Alumnae Association, to Pursue a Course in Administration,
Supervisory, or Public Health Work at Teachers College, Columbia
University, to the Student Having the Highest Record
in Scholarship,

ALICE VERA ELCHENKO

The Elizabeth Collins Lee Prize of \$50.00 to the Student Having the Second
Highest Average in Scholarship,
RITA VIRGINIA MILLER

The Mrs. John L. Whitehurst Prize of \$25.00 for the Highest Average in
Executive Ability,
ANN FRANCES HOKE

The Edwin and Leander M. Zimmerman Prize of \$50.00 for Practical
Nursing and for Displaying the Greatest Interest and
Sympathy for the Patients,
ANN FRANCES HOKE

The University of Maryland Nurses' Alumnae Association Pin, and
Membership in the Association, for Practical Nursing and
Executive Ability,
ETHEL IRENE EVANS

School of Pharmacy
Certificate of Honor
SISTER MARY THEODOSIA PRUNER

REGIMENTAL ORGANIZATION, R. O. T. C. Unit, 1935-1936

LOUIS A. ENNIS, Colonel, Commanding
 W. BROOKS BRADLEY, Lieutenant Colonel, Second-in-command
 HENRY G. KNOCH, Captain, Regimental Adjutant
 FRANCIS D. SHOEMAKER, Captain, Regimental Training and Liaison Officer
 LEONARD SMITH, Captain, Regimental Staff Officer
 B. JAMES DAYTON, Captain, Regimental Staff Officer
 JAMES F. ZIMMERMAN, Captain, Regimental Staff Officer

FIRST BATTALION

NOEL O. CASTLE, Major, Commanding
 HARRY C. BYRD, JR., Captain, Second-in-Command
 ROBERT W. THOMAS, First Lieutenant, Adjutant

COMPANY "A"

Edward M. Minion,
 Commanding

COMPANY "B"

Captains

Howard F. Allard,
 Commanding

COMPANY "C"

Edward H. D. Gibbs,
 Commanding

First Lieutenants

Bennard F. Bruns
 J. Hope Morgan
 Jack W. Phillips
 J. Brady Smith

Raymond F. Bartelmes
 Arthur R. Buddington
 Austin J. Hall
 William A. Hart

Corbin C. Cogswell
 Sidney P. McFerrin
 Joseph W. Sisson

SECOND BATTALION

ANDREW B. BEVERIDGE, Major, Commanding
 HARMON L. SPENCER, Captain, Second-in-Command
 J. HERBERT BRILL, First Lieutenant, Adjutant

COMPANY "D"

James F. Hart, Jr.,
 Commanding

COMPANY "E"

Captains

George C. Hart,
 Commanding

COMPANY "F"

Robert M. Slye,
 Commanding

First Lieutenants

Charles L. Callahan
 John F. Christliff
 George E. Gilbert
 Milo W. Sonen

George E. Harrington
 William A. Pates
 Hugh H. Saum

William N. Garrott
 Paul L. King
 William R. Schneider
 Ellis P. Root

THIRD BATTALION

JOHN M. FIRMIN, Major, Commanding
 MELVIN C. LANKFORD, Captain, Second-in-Command
 ALTON E. RABBITT, First Lieutenant, Adjutant

COMPANY "G"

Alton L. Sanford,
 Commanding

COMPANY "H"

Captains

Albert W. Webb,
 Commanding

COMPANY "I"

Ernest R. Eaton
 Commanding

First Lieutenants

William R. Beall
 Lewis T. Gibbs

Theodore H. Erbe
 William R. Evans
 Louis F. Flagg
 Kenneth R. Mason

Louis Park
 George H. Sachs
 Henry C. Strobel

CADET BAND

SAMUEL G. LEISHEAR, Captain, Commanding
 HARRY J. LYNN, First Lieutenant

Band under the direction of Master Sergeant Otto Siebeneichen, Retired, formerly with the Army Band, Washington Barracks, Washington, D. C.

NON-COMMISSIONED OFFICERS

FIRST BATTALION

COMPANY "A"

Martin L. Brotemarkle

COMPANY "B"

First Sergeants

Charles H. Cooke

COMPANY "C"

Herman P. Dial

Platoon Sergeants

Francis M. Bower
 Philip Firmin

Charles S. Furtney
 Thomas D. Harryman

Sergeant Guides

Marriott W. Bredekamp
 Willson C. Clark
 Irving Mendelsohn

Raymond Davis, Jr.
 Harry A. Dosch
 Norman L. Hobbs

SECOND BATTALION

COMPANY "D"

Charles F. Ellinger

COMPANY "E"

First Sergeants

John J. Gormley

COMPANY "F"

John G. Hart

Platoon Sergeants

Richard M. Hunt
 Justin D. Paddleford

Norman P. Patterson
 Alfred B. Pettit

Sergeant Guides

Edward J. Fletcher
 R. Bernard Graeves
 Albert P. Backhaus

Robert O. Hammerlund
 Carlisle H. Humelsine
 Joseph S. Lann

THIRD BATTALION

COMPANY "G"

Houlder Hudgins

COMPANY "H"

First Sergeants

Julius W. Ireland

COMPANY "I"

Harold L. Kelly, Jr.

Platoon Sergeants

Clay M. Webb
 Aaron W. Welch

Samuel G. Wood
 Max D. Zankel

Sergeant Guides

Jesse D. Patterson
 Karlton W. Pierce
 Charles E. Morgan

Walter K. Scott
 Maurice B. Sinsheimer, Jr.

BAND

A. E. SAVAGE, First Sergeant

Register of Students, 1935-1936

COLLEGE OF AGRICULTURE

SENIOR CLASS

Allard, Howard F., Clarendon, Va.
 Armiger, Walter H., Beltsville
 Bailey, John W., Aberdeen
 Bartlett, Fitz J., Mt. Rainier
 Boarman, William F., Hyattsville
 Buddington, Arthur R., College Park
 Buscher, Bernard E., Washington, D. C.
 Byrd, Harry C., Jr., College Park
 Carter, Edward P., Washington, D. C.
 Cissel, Chester M., Ellicott City
 Clark, Harry W., Forest Hill
 Croft, Charles C., Washington, D. C.
 DeVolt, Harold M., Barneveld, N. Y.
 Eiker, Walter M., Washington, D. C.
 Fales, John H., Silver Spring
 Garrott, William N., Knoxville
 Greenwood, Grace-Louise, Brentwood
 Hamilton, Wayne B., Oakland
 Harrington, George E., Washington, D. C.
 Henderson, William H., Woodbine
 Hoshall, Thomas J., Parkton
 Huntington, Elizabeth L., Upper Darby, Pa.
 Imphong, Paul H., Hancock

JUNIOR CLASS

Bourke, Anne R., Washington, D. C.
 Bowers, Lloyd C., Oakland
 Butler, Henry E., Worton
 Cowgill, William H., Hyattsville
 Crump, Robert, Frostburg
 Daly, Edmond T., New Brighton, N. Y.
 Dawson, Roy C., Washington, D. C.
 Fletcher, Edward J., Washington, D. C.
 Gormley, John J., Chevy Chase
 Grodjesk, Bernice, Jersey City, N. J.
 Guckeyson, John W., Chevy Chase
 Hill, Rodney T., Laurel
 Hobbs, Lewis F., Jr., Silver Spring
 James, William S., Hancock
 Keller, Charles E., Middletown
 Kirshbaum, Amiel, Washington, D. C.
 Leighty, Raymond V., Clarendon, Va.
 McFadden, Burton M., Hagerstown
 Mendelsohn, Irving P., Washington, D. C.

SOPHOMORE CLASS

Bishop, James W., Laurel, Del.
 Boekhoff, Claire L., Chevy Chase
 Bowie, Oden, Mitchellville
 Buchholz, James H., Catonsville
 Caplan, Raphael F., Freeland

King, Addison W., Baltimore
 Lovell, John C., New Windsor
 Maccubbin, H. Pearce, Baltimore
 Mayer, Elmer L., Washington, D. C.
 Mehring, Arnon L., Hyattsville
 Miller, Oscar J., Clarksburg
 Mullinix, Paul E., Woodbine
 Pelczar, Michael J., Jr., Stemmers Run
 Puncchar, Joseph F., Curtis Bay
 Rabbitt, Alton E., College Heights
 Radebaugh, Garnett D., Forest Hill
 Ramsburg, Herman F., Frederick
 Sisson, Joseph W., Jr., Washington, D. C.
 Sockrider, Elsie M., Washington, D. C.
 Stevens, C. Grayson, New Market
 Terbush, Theron L., Alma, Okla.
 Thorne, Clayton T., Silver Spring
 Toole, Elizabeth L., Lanham
 Vawter, James H., Laurel
 Warfield, William C., College Park
 Weber, J. Logan, Oakland
 Willis, Victor, Elkton
 Wolk, Jack, Washington, D. C.

Nellis, David C., Takoma Park
 Nezbed, Robert L., Baltimore
 Nolte, William A., Washington, D. C.
 O'Hanlon, Ardle P., Washington, D. C.
 Oswald, Elizabeth J., Chevy Chase
 Pettit, Alfred B., Takoma Park
 Rodier, John M., Lanham
 Schulz, Ray, Washington, D. C.
 Shegogue, Edward R., Landover
 Sippel, William L., Baltimore
 Stevenson, Elmer C., Takoma Park
 Stoddard, David L., Hyattsville
 Thomas, Virginia E., Newark, Del.
 Wagaman, Kenneth R., Sabillasville
 Watkins, Dayton O., Baltimore
 Webb, Clay M., Vienna
 Welch, Aaron W., Galena
 White, Horace R., Annapolis

Carter, Henry H., Rockville
 Carver, Ann E., Perryville
 Connelly, John V., Riverdale
 Converse, Henry T., Jr., Beltsville
 DeCecco, James N., Vienna

Downey, Charles L., Williamsport
 Farrington, Edith, Chevy Chase
 Fisher, Elwood G., Washington, D. C.
 Gibbs, William E., Hyattsville
 Gilbertson, Warren H., Bladensburg
 Goldsmith, John S., Allen
 Gottwals, Abram Z., Goldsboro
 Guill, John H., Takoma Park
 Gupton, Ewing L., Berwyn
 Henkin, Allen E., Washington, D. C.
 Johnson, Daniel B., Beltsville
 Johnston, Frederick A., Takoma Park
 Kuhn, Albin O., Woodbine
 Lewis, Glenn W., Lantz
 Lung, Ernest H., Smithsburg
 Marche, William T., Hyattsville
 McBride, Dorothy M., Elkridge
 Miller, George P., Clinton
 Piquett, Price G., Catonsville

FRESHMAN CLASS

Adler, Bernice, Newark, N. J.
 Astle, Charles C., Rising Sun
 Baker, Alva S., Baltimore
 Berkowitz, Melvin, Washington, D. C.
 Biskin, Shirley L., Takoma Park
 Brinckerhoff, Mary L., Chevy Chase
 Brownell, James F., Takoma Park, D. C.
 Browning, Frank M. W., Lanham
 Cohen, Charlotte F., E. Orange, N. J.
 Crane, Julian C., College Park
 Davis, Virginia E., Washington, D. C.
 Dean, William H., Newark, Del.
 Eck, Clarence A., Raspeburg
 Egan, John J., Waterbury, Conn.
 Freedman, Irving J., S. Norwalk, Conn.
 Fugitt, Donald T., Washington, D. C.—Unc.
 Galbreath, Paul M., Street
 Gatch, Benton R., Raspeburg
 Gianoly, Louis W., Lanham
 Gordon, Thomas W., Baltimore
 Gude, John J., Hyattsville
 Halla, Walter R., Indian Head
 Hauver, Roland T., Myersville
 Hayman, Linwood G., Kingston
 Hess, Kenneth S., Washington, D. C.
 Heubeck, Elmer, Jr., Catonsville
 Hite, Norborne A., Port Deposit
 Homewood, Jeanne C., Havre de Grace
 Hopper, Guy S., Brentwood
 Hopping, Catherine E., Washington, D. C.
 Hughes, Frank W., Washington, D. C.
 Jacques, Denton R., Smithsburg
 James, Lynwood B., Jr., Chevy Chase—Unc.
 Jarrell, William E., Ridgely
 Johnson, Edwin R., Germantown

Price, J. Wilmer, Jr., Catonsville
 Ravenburg, Ralph R., Edgewater
 Remsen, Peter, Takoma Park
 Schmidt, Edward H., Jr., Seat Pleasant
 Schutz, J. Logan, Washington, D. C.
 Seabold, George W., Jr., Glyndon
 Shaffer, Charles H., Jr., Washington, D. C.
 Shepherd, Edward O., Bristol
 Sisler, Fred D., Washington, D. C.
 Skinner, Calvin L., Sudlersville
 Snyder, Fannye D., Annapolis
 Steiner, Wilmer W., Washington, D. C.
 Stevenson, Frank V., Takoma Park
 Thornton, Eugene, Jr., Chestertown
 Wall, Dorothy S., Catonsville
 Williams, Donald H., Washington, D. C.
 Yeager, S. Anita, Baltimore
 Young, George A., College Park

Jones, Griffith D., Woodbine
 Kilby, Wilson M., Conowingo
 Kluge, Gordon L., Washington, D. C.
 Martin, Clifton O., Rockville
 McFarland, Frank R., Jr., Cumberland
 Melman, Harold, Crestview
 Michlovitz, Louis E., Baltimore
 Miller, Lee A., Hyattsville
 Miller, Thomas E., Washington, D. C.
 Nutter, Charles W., Washington, D. C.
 Oakley, Ned H., Washington, D. C.
 Peaslee, Joseph K., Washington, D. C.
 Phelps, Richard N., McDonogh
 Potter, Lloyd A., Bethesda
 Punnett, Ruth S., Leonia, N. J.
 Remsberg, George C., Jr., Middletown
 Rinehart, John W., Relay
 Ruble, Kyle, Poolesville
 Schmier, Charles N., Woodlawn
 Shaw, Clay W., Stewartstown, Pa.
 Sutton, Richard S., Kennedyville
 Sweeney, Edward K., Brentwood
 Talcott, Ellen E., Washington, D. C.
 Tarbett, Lewis N., Takoma Park
 Wallace, John A., Bethesda
 Ward, Stephenson A., Havre de Grace
 Willingham, Patricia M., University Park
 Wilmeth, Edward L., Takoma Park—Unc.
 Winkler, Fred B., Chevy Chase
 Witt, Detlef J., Anacostia, D. C.
 Wood, Edgar W., Washington, D. C.
 Wright, Arthur E., Washington, D. C.
 Yates, William B., Cambridge
 Young, James G., Baltimore
 Zipkin, Norman N., Capitol Heights

UNCLASSIFIED AND PART TIME

Anthony, James T., Chestertown
Drennan, Mary F., Washington, D. C.
Frazer, Mary W., Washington, D. C.
Hughes, George B., Ammendale
Katsura, Saburo, Washington, D. C.
Mills, Elizabeth B., Washington, D. C.
Ortenzio, Louis F., College Park

WINTER SCHOOL

Anderson, Helen H., Beltsville
Attick, Arabelle L., Berwyn
Cockerill, Albert A., Purcellville, Va.
Davidson, James, Jr., Bowie
Dryden, James H., Newark
Fogle, Frank W., Union Bridge
Garner, Racheal H., Westminster
Huff, James E., Jr., Street
King, Ben A., Gambrills
Morgan, Hillen J., Welcome
Schwab, William I., Rockville

COLLEGE OF ARTS AND SCIENCES

SENIOR CLASS

Allen, Dorothy V., Washington, D. C.
Ambrose, H. Duvall, Baltimore
Baldwin, David H., Washington, D. C.
Barnsley, June, Rockville
Beacham, Edmund G., Baltimore
Bogley, Samuel E., Friendship Heights
Bowie, William B., Bennings, D. C.
Brill, J. Herbert, Baltimore
Brooks, Lester, Brooklyn, N. Y.
Buckingham, William O., Washington, D. C.
Burroughs, Reginald, Upper Marlboro
Callahan, Charles L., Baltimore
Cave, Edward F., Washington, D. C.
Chapin, Mildred F., Chevy Chase
Cogswell, Charles L., Washington, D. C.
Cogswell, Corbin C., Jr., Pikesville
Cummings, Bernard A., Chevy Chase
Dantzig, George B., Hyattsville
Davidson, Mildred, Chevy Chase
Donovan, Dorothy C., Washington, D. C.
Duggan, Frank P., Baltimore
Eaton, Ernest R., Washington, D. C.
Edmondson, Charles E., Cambridge
Ellis, Wayne P., Jr., Washington, D. C.
Ennis, Louis A., Long Branch, N. J.
Erbe, Theodore H., Baltimore
Evans, Ralph I., Washington, D. C.
Farson, John H., Showell
Fisher, Ethel A., Upper Marlboro
Forman, Sylvan E., Baltimore
Fowler, Charles R., Washington, D. C.
Friedman, Harold B., Silver Spring
Gammon, Nathan, Jr., Washington, D. C.
Golden, Lex B., Washington, D. C.
Goodhart, Raymond J., Washington, D. C.
Graham, William J., Washington, D. C.
Greenfield, Ray H., Takoma Park
Grinstead, Marjorie R., Washington, D. C.
Handler, Isidor, Kingston, N. Y.
Hart, George C., Baltimore
Hart, James F., Jr., Baltimore
Haskin, Frederic J., Jr., Chevy Chase
Hathaway, Caleb R., Chevy Chase
Helfgott, Jack L., Mitchelville
Hyatt, Herbert S., Damascus
Jones, William R., Ridgely
Kesler, Katherine E., Silver Spring
Kohn, Schuyler G., Baltimore
Kozloski, Henry R., Mt. Carmel, Pa.
Langley, Theodore C., Washington, D. C.
Leishear, Samuel A., Washington, D. C.
Litschert, Robert G., Hyattsville
Love, Solomon, Washington, D. C.
Lung, Homer D., Smithsburg
Lutes, Lawrence V., Silver Spring
Lynn, Harry J., Washington, D. C.
Maddox, H. Louise, Hyattsville
Marche, Louise C., Hyattsville
Mason, Kenneth R., Newark
Maurer, Richard H., Washington, D. C.
McAboy, Lyman R., Washington, D. C.
McFerrin, Sidney P., Baltimore
McIntire, Mary L., Oakland
Meloy, Samuel W., Washington, D. C.
Miles, Dorothy H., Washington, D. C.
Miller, David, Washington, D. C.
Miller, Jean, Berwyn
Miller, Rebecca C., Berwyn
Minion, Edward M., Newark, N. J.
Moreland, Miriam L., Washington, D. C.
Morgan, J. Hope, Welcome
Murray, Guy E., Washington, D. C.
Nevius, Wilford E., College Park
Norment, Nancy L., Hagerstown
Oland, Charles D., Olney
Padgett, E. Anne, Baltimore
Parker, Marion E., Washington, D. C.
Powell, Frances K., Brookeville
Quirk, Anna-Marie L., Washington, D. C.

Quirk, Betty C., Washington, D. C.
Reich, Morris H., Astoria, L. I., N. Y.
Reicher, Sol M., Baltimore
Reid, Robert T., Baltimore
Ritcher, Christian F., Jr., Overlea
Rintoul, James L., Jr., Baltimore
Robertson, Thomas E., Washington, D. C.
Rothschild, Carl, Chefoo, China
Ruben, Mortimer, Brooklyn, N. Y.
Sacks, Jerome G., Baltimore
Sanford, Alton L., Chevy Chase
Saum, Hugh H., Lanham
Schaffer, George H., Jr., Baltimore
Scheele, Thomas F., Washington, D. C.
Schneider, William R., Ellicott City
Sieling, Frederick W., Annapolis Junction
Simon, Ruth, Washington, D. C.
Small, Milton, Hempstead, N. Y.
Smith, J. Brady, Baltimore
Smith, Leonard, Washington, D. C.
Soltanoff, Walter, Montclair, N. J.
Spencer, Harman L., Washington, D. C.
Stanton, William A., Hyattsville
Stark, Elwood V., Aberdeen
Sweeney, Thomas R., Washington, D. C.
Thomas, Robert W., Silver Spring
Tucker, Lester W., Abingdon
Velenovsky, Joseph J., Baltimore
Voris, J. Calvin, Laurel
Waller, William F., Silver Spring
Wasserman, Sidney, Baltimore
Webb, Albert W., Vienna
Whiteford, Charles G., Baltimore
Wiederlight, Seymour, Brooklyn, N. Y.
Willard, Daniel D., Cumberland
Willey, Edward J., Washington, D. C.
Williams, William W., Washington, D. C.
Wilson, Meredith R., White Hall
Wolfe, John K., Washington, D. C.
Yeager, Paul J., Catonsville
Young, Harold K., Detour
Yowell, Roy H., Washington, D. C.

JUNIOR CLASS

Amerman, Theodore M., New York, N. Y.
Amiss, Helen C., Chevy Chase
Athey, Thomas B., Severna Park
Avery, John L., Washington, D. C.
Balch, Clyde W., Hyattsville
Beebe, Charles H., Washington, D. C.
Bell, John W., Riverdale
Bennett, Lucille K., Hyattsville
Benson, Brian M., Baltimore
Berman, David P., Hoboken, N. J.
Billig, S. Deborah, Huntington, L. I., N. Y.
Bittinger, Charles, Washington, D. C.
Bonnett, Warren L., Aberdeen
Boothe, John E., Washington, D. C.
Bower, Francis M., Mt. Rainier
Bradley, W. Brooks, Baltimore
Bredekamp, Marriott W., Washington, D. C.
Brian, Walter P., Ellicott City
Brown, A. Freeborn, III, Havre de Grace
Brueckner, Fred L., College Park
Campiglio, Robert G., Milton, Pa.
Capalbo, John L., Brooklyn, N. Y.
Cayton, Marcelle I., Brooklyn, N. Y.
Cole, Harold S., Brooklyn, N. Y.
Cooke, Charles H., Washington, D. C.
Coster, William F., Jr., Elmhurst, L. I., N. Y.
Cowie, Jean A., Perry Point
Culp, Charles H., Whiteford
Cutler, Dorothy M., Silver Spring
Daniel, Daniel R., Baltimore
Daue, Edwin O., Jr., Silver Spring
Davis, L. Voncile, College Park
Davis, Raymond, Jr., Washington, D. C.
Deskin, Mark, Riverdale
Dittmar, Gordon F., Baltimore
Dolan, Loretta M., Sparrows Point
Dosch, Harry A., Jr., Baltimore
Downin, John E., Hyattsville
Drake, H. Daniel, Jr., Washington, D. C.
Dresher, Edward, Hackensack, N. J.
Edwards, William W., Chevy Chase
Ellinger, Charles F., Baltimore
Ellison, Max M., Baltimore
Evans, Dorothy E., Takoma Park
Everett, Genevieve, Pasadena
Farr, Earl W., Jr., Washington, D. C.
Fischer, Isadore, Washington, D. C.
Fosbroke, Gerald E., Elkridge
Fuller, Frances E., Crisfield
Gaczynski, Eugenia T., Jersey City, N. J.
Garber, George D., Frederick
Gengnagel, Rosella B., Catonsville
Getty, Gorman E., Lonaconing
Godwin, Donnie, Annapolis
Goldberg, Harry, Baltimore
Graeves, R. Bernard, Silver Spring
Gray, Ralph, Chevy Chase
Hammerlund, Robert O., Washington, D. C.
Hargy, Francis R., College Park
Hart, John G., Hagerstown
Hebb, John S., III, Baltimore
Hendrix, Nevins B., Port Deposit
Hennig, Elmer A., Washington, D. C.
Hill, Florence R., Laurel
Hobbs, Norman L., Silver Spring
Hobson, Barbara E., Washington, D. C.

Hoenes, Sophia W., Baltimore
 Hooton, Elizabeth L., Hyattsville
 Hughes, Robert L., Jr., Aberdeen
 Hunt, Richard M., Washington, D. C.
 Hutchinson, James E., Hyattsville
 Ireland, Alfred W., Baltimore
 Jacques, Lancelot, Jr., Smithsburg
 Jaffe, Vita R., Brooklyn, N. Y.
 Jewell, Benjamin A., Grasonville
 Johns, Gladys V., Beltsville
 John, Malcolm L., Washington, D. C.
 Johnson, Pyke, Washington, D. C.
 Johnston, Doris H., Takoma Park
 Jones, Joseph F., Baltimore
 Jones, Marguerite E., Owings Mills
 Jordan, Francis X., Washington, D. C.
 Kalis, Samuel D., Baltimore
 Kelly, George B., Washington, D. C.
 Kelly, John F., Towson
 Kemper, Betty J., Washington, D. C.
 Keplinger, Anna-Lura, Washington, D. C.
 Klein, Alvin S., Frederick
 Krieg, Edward F., Baltimore
 Krulevitz, Keaciel, Baltimore
 Land, Robert H., Baltimore
 Lankford, Melvin C., Baltimore
 Lann, Joseph S., Washington, D. C.
 Laukaitis, Peter E., Waterbury, Conn.
 Leet, Harvey T., Chevy Chase
 Levy, Arthur I., Brooklyn, N. Y.
 Lewis, Mary W., Bethesda
 Lindner, Dorothy E., Washington, D. C.
 Loker, Frank F., Leonardtown
 Lugar, Charles E., Hagerstown
 Lundell, Ernst D., Chevy Chase
 Maccubbin, Mary F., Laurel
 Martin, Clarence W., Baltimore
 Martinez Cortez, Josefina, Baltimore
 Matson, Ruby I., Takoma Park
 Matthews, William B., Worton
 May, John B., III, Washington, D. C.
 McCarthy, Joseph H., Washington, D. C.
 Miller, Clark R., Spokane, Wash.
 Miller, Eunice, Berwyn
 Mitchell, William A., Baltimore
 Mobus, Paul F., Ellerslie
 Molofsky, Bernice, Baltimore
 Morgan, Charles E., Washington, D. C.
 Nedomatsky, Ivan E., Lansdowne
 Nordeen, Georgia A., Mt. Rainier
 Oliver, Elmer R., Washington, D. C.
 Osborn, James M., Washington, D. C.
 Paddleford, Justin D., Washington, D. C.
 Panoff, Mortimer, Brooklyn, N. Y.
 Park, Charles A., Jr., Washington, D. C.

Patterson, Jesse D., Indian Head
 Phillips, William S., Jr., Washington, D. C.
 Pierce, Karlton W., Washington, D. C.
 Polack, Samuel J., Hagerstown
 Pollack, Frank L., Brooklyn, N. Y.
 Posner, Leonard, Brooklyn, N. Y.
 Remington, Jesse A., Jr., Laurel
 Richmond, Marion B., Washington, D. C.
 Roby, Dorothy V., Riverdale
 Russell, Thomas E., Jr., Frederick
 Sallow, William H., Baltimore
 Schuh, Geraldine J., Chevy Chase
 Schwartz, Stanley E., Brooklyn, N. Y.
 Scott, Walter K., Landover
 Scrivener, David S., Washington, D. C.
 Seidenberg, Abraham, Washington, D. C.
 Sesso, George A., Washington, D. C.
 Silberg, Melvin S., Baltimore
 Sinsheimer, Maurice B., Jr., Washington, D. C.
 Sklar, Leo J., Far Rockaway, N. Y.
 Smith, F. Edward, Jr., Baltimore
 Smith, Frank S., Pasadena
 Smith, Herbert L., Washington, D. C.
 Somerville, Ruth E., Cumberland
 Stambaugh, Kenneth A., Baltimore
 Sterling, Meta A., Crisfield
 Talbott, Priscilla M., Bristol
 Thomason, Clarence T., Washington, D. C.
 Thompson, Kathryn E., Daytona Beach, Fla.
 Thompson, Raymond K., Riverdale
 Thurston, Eugene B., Floral Park, N. Y.
 Tuerk, C. Edward, Baltimore
 Turner, Phillip R., Takoma Park
 Venemann, Chester R., College Park
 Venemann, Virginia L., Riverdale
 Wahl, Carleton W., Silver Spring
 Waite, Merton T., Odenton
 Wasserman, Jerome, Baltimore
 Waters, Albert G., Washington, D. C.
 Watson, Stanley B., Brandywine
 Whalin, James T., Hyattsville
 White, George W., Baltimore
 Whitney, Mary F., Washington, D. C.
 Wilkins, Jesse L., Pocomoke City
 Wilson, Iris E., Takoma Park
 Wood, Samuel G., St. Michaels
 Woodell, John H., Baltimore
 Zankel, Max D., Brooklyn, N. Y.
 Zebelean, John, Catonsville
 Zihlman, Frederick A., Washington, D. C.
 Zimmerman, Richard E., Frederick

SOPHOMORE CLASS

Ackerman, Julius E., Washington, D. C.
 Atkin, Maurice D., Washington, D. C.
 Baevsky, William D., Penns Grove, N. J.
 Baker, Herbert W., Edgemont
 Baker, Robert E., Washington, D. C.
 Barnett, Robert E., Washington, D. C.
 Baxley, Joshua W., Ellicott City
 Behm, Carl, Jr., Baltimore
 Benton, Charles L., Jr., Linthicum Heights
 Bernstein, Norman, Washington, D. C.
 Berry, James B., Jr., Bennings, D. C.
 Birmingham, Thomas J., Sparrows Point
 Bishop Eleanor, Bethesda
 Bitzing, Phyllis A., Takoma Park
 Bowen, Joseph J., Waterbury, Conn.
 Brice, Nancy T., Millburn, N. J.
 Brockman, E. Louise, Riverdale
 Brooks, Thomas R., Hyattsville
 Brotman, Alfred, Baltimore
 Brown, Thomas C., Havre de Grace
 Browning, Warren, Lanham
 Burton, Robert J., Cumberland
 Calladine, Virginia J., Niagara Falls, N. Y.
 Campagnoli, Francis P., Washington, D. C.
 Campbell, Robert van L., Hagerstown
 Carleton, Harold B., Washington, D. C.
 Cayton, William I., Brooklyn, N. Y.
 Chrisler, Willard L., Washington, D. C.
 Clapp, Helen E., Chevy Chase
 Clark, Fitzhugh, Chevy Chase
 Clark, Ralph E., Dundalk
 Clements, Samuel B., Washington, D. C.
 Cohen, Gertrude C., Passaic, N. J.
 Cohen, Maxwell L., Washington, D. C.
 Collier, David L., Baltimore
 Conley, Virginia C., Baltimore
 Corridon, John R., Washington, D. C.
 Crampton, William G., Washington, D. C.
 Crastnopol, Philip, Newark, N. J.
 Creamer, Robert M., Baltimore
 Culp, Richard T., Chevy Chase
 Danforth, Dorothy M., Baltimore
 Denney, Fred H., Bladensburg
 DeVilbiss, Preston S., Jr., Walkersville
 Dolan, Patrick L., Sparrows Point
 Donahoo, Harry C., Chester, Pa.
 Donohue, Mildred D., Baltimore
 Dow, Mary F., College Park
 DuBrow, Rita, Newark, N. J.
 Duley, Oscar R., Croome Station
 Edwards, John B., Washington, D. C.
 Epstein, Edwin, Centreville
 Ernest, Lois E., Kensington
 Feinberg, Florene Z., Thomasville, Ga.
 Fink, Kenneth E., Baltimore
 Ford, John H., Baltimore
 Forman, Morris, Baltimore

Foss, George E., Relay
 Franzoni, Joseph D., Washington, D. C.
 Freiman, Herbert G., Baltimore
 Friedman, Jack, Washington, D. C.
 Fuerst, Robert G., Hyattsville
 Garneau, Pierre J., Stratford, Conn.
 Gebhardt, Russell G., Silver Spring
 Gilbertson, Kenneth G., Bladensburg
 Greer, Margaret A., Bel Air
 Gunby, Laura E., Marion Station
 Gunther, Francis J., Washington, D. C.
 Gutschmidt, Nathan, N. Bergen, N. J.
 Haimovicz, Joseph P., Washington, D. C.
 Harmatz, Herb J., Washington, D. C.
 Hay, Perry I., Washington, D. C.
 Haynes, Anne M., Trenton, Tenn.
 Haynes, Sallie T., Trenton, Tenn.
 Heaton, Charles C., Baltimore
 Henderson, Joseph, Rockville
 Heringman, Leo A., Baltimore
 Hoagland, Philip L., Washington, D. C.
 Holbrook, Richard D., Washington, D. C.
 Hughes, Fred J., Poolesville
 Hughes, Warren A., Washington, D. C.
 Hyslop, Charles D., Silver Spring
 Jackson, Frank H., Chevy Chase
 Jacobs, Bernice E., Baltimore
 Jacobs, John S., Washington, D. C.
 Jacobs, Nathaniel J., Baltimore
 Jacobs, Norman B., Jr., Gaithersburg
 Johnson, George A., Baltimore
 Johnson, William R., Baltimore
 Jones, Jacob L., Laurel
 Judd, Barbara, Merion, Pa.
 Kempton, Christine, Lanham
 Kennon, W. Stanley, Washington, D. C.
 Keppler, William J., Washington, D. C.
 Keyes, Karl E., Hyattsville
 Lang, Richard E., Passaic, N. J.
 Lawless, Van Ness, Washington, D. C.
 Lawson, J. Keith, Washington, D. C.
 Lee, Richard E., Landover
 Lehmann, Theodore S., Baltimore
 Lewis, Barbara R., Washington, D. C.
 Liberato, Venancio Q., Riverdale
 Lindsay, Gorton P., Baltimore
 Linn, Lois B., University Park
 Littleford, Rita T., Washington, D. C.
 Lovell, Marker J., New Windsor
 Lowe, William C., Stevensville
 Lowitz, Irving R., Baltimore
 Mason, John H., Silver Spring
 Mattingly, Joseph A., Leonardtown
 Maxwell, Francis T., Towson
 McCaffrey, Richard H., Baltimore
 McCurley, James W., Relay

McFadden, Duncan B., Aberdeen Proving Grounds
 McGoury, Thomas E., Odenton
 McIntire, John N., Oakland
 McLaughlin, Arlene M., Baltimore
 McWilliams, William J., Indian Head
 Miller, Cary H., Branchville
 Miller, Harry A., Washington, D. C.
 Miller, Mary E., Baltimore
 Miller, Philip, Brentwood
 Moore, John E., Ellicott City
 Morris, Felix R., Bridgeport, Conn.
 Mullett, William B., Silver Spring
 Newman, Robert A., Chevy Chase
 Olinger, Carolyn, Bloomfield, N. J.
 O'Loughlin, Richard K., Takoma Park
 Owens, James D., Linthicum Heights
 Pailthorp, Robert W., Takoma Park
 Palmer, Arnaldo, San German, Puerto Rico
 Panzer, Hubert, Newark, N. J.
 Paterson, H. Jean, Towson
 Pearson, H. R., St. George's Island
 Pepper, Paul R., Washington, D. C.
 Perry, A. Gordon, Hyattsville
 Potts, B. Sheba, Baltimore
 Prescott, Harriet J., Winchester, N. H.
 Purnell, William M., Ocean City
 Quigley, John L., Washington, D. C.
 Reeves, Samuel W., III, Fort George G.
 Meade
 Richardson, Donald W., Washington, D. C.
 Richardson, Vaughn E., Willards
 Robertson, Corneliuett B., Annapolis
 Robinson, Charles H., Cardiff
 Rochlin, Martin, Baltimore
 Ross, Dorothy, Washington, D. C.
 Sachs, Harold, Washington, D. C.
 Sadle, Alexander, Washington, D. C.
 Sagotsky, Samuel R., Brooklyn, N. Y.
 Schaar, Walter S., Catonsville
 Schiffler, Robert A., Wheeling, W. Va.
 Schreter, Harvey A., Baltimore
 Shaffer, Betty B., Wilmington, Del.
 Shapiro, Helen, Baltimore
 Sherrill, Elizabeth B., Sparks
 Sherwood, William T., Washington, D. C.
 Shewbridge, Benjamin B., Baltimore

FRESHMAN CLASS

Aarons, Ralph, Baltimore
 Abrams, Norman J., Baltimore
 Adams, George D., Washington, D. C.
 Aitcheson, William W., Berwyn
 Albert, Milton J., Waterbury, Conn.
 Aldridge, William A., Baltimore
 Alexander, Louis E., Frederick—Unc.
 Allen, Frances M., Takoma Park
 Allen, George D., Takoma Park

Shipley, Amy E., Harman
 Smith, Charles E., Washington, D. C.
 Smith, Harold W., Baltimore
 Snyder, Roger W., Hagerstown
 Sokal, Mitchell, Brooklyn, N. Y.
 Spalding, Joseph P., Silver Spring
 Spruill, William T., Brandywine
 Staire, John R., Jr., Canonsburg, Pa.
 Stein, Martin K., Baltimore
 Stevens, Evelyn M., Laurel
 Stevens, Grace, Washington, D. C.
 Stonebraker, John E., Hagerstown
 Strauss, Charles D., Baltimore
 Thies, William N., Washington, D. C.
 Thomas, Fred B., Washington, D. C.
 Thompson, Robert H., Washington, D. C.
 Tolker, Ethel B., Silver Spring
 Townsend, Mary E., Frostburg
 Towson, William O., Baltimore
 Treacy, James J., Oakland
 Turpin, Robert D., Centreville
 Vandervoort, Susan H., Middletown, Pa.
 Vaught, Valerie V., Riverdale
 Vogel, Louis, Jr., Baltimore
 Waldman, Sylvia R., Hyattsville
 Walzer, Howard B., Brooklyn, N. Y.
 Watson, George B., Towson
 Weis, Helen L., Baltimore
 Wells, Robert L., Gaithersburg
 Werner, Janet, Catonsville
 White, Mary M., Dickerson
 White, Robert P., Washington, D. C.
 Whiton, Alfred C., Brentwood
 Wilson, Margaret F., Baltimore
 Wilson, Ruby E., Mt. Rainier
 Wise, Paul S., Dover, Del.
 Wohlstadter, Leonard, Brooklyn, N. Y.
 Wojtczuk, John A., Baltimore
 Wolf, John F., Hyattsville
 Woll, Ephraim, Bronx, N. Y.
 Wood, George F., Washington, D. C.
 Woodwell, Lawrence A., Kensington
 Yochelson, Aaron, Hyattsville
 Young, Edmond G., Baltimore
 Young, Jerome L., Washington, D. C.
 Zabrek, Herman M., Washington, D. C.

Allen, John J., Hagerstown
 Alter, Irving D., Baltimore
 Anskitis, John P., Waterbury, Conn.
 Anspen, Harry D., Washington, D. C.
 Aring, Bernice C., Baltimore
 Armstrong, George L., Baltimore
 Auerbach, Lawrence W., Brooklyn, N. Y.
 Badenhoop, H. John, Baltimore
 Balmer, Charles B., Lyndhurst, N. J.

Barthel, Robert A., Jr., Catonsville
 Batch, Francis E., Hyattsville
 Beers, John H., Washington, D. C.
 Bellows, Henry J., North Haven, Conn.
 Benbow, Robert P., Sparrows Point
 Benjamin, Louis, Baltimore
 Bens, Henry J., Washington, D. C.
 Bergmann, William F., Takoma Park—Unc.
 Berman, Albert D., Far Rockaway, N. Y.
 Berman, Robert, Trenton, N. J.
 Berryman, Esther O., Baltimore
 Bethell, Margery L., Yonkers, N. Y.
 Bishopp, Fred T., Silver Spring
 Bloom, Morton I., Baltimore
 Bonanno, Antonio C., Washington, D. C.
 Bonnett, Howard G., Washington, D. C.
 Boose, Dorothy M., Washington, D. C.
 Borlik, Ralph, Washington, D. C.
 Bormel, Albert M., Baltimore
 Bowman, John D., Rockville
 Bowman, Leonard C., Lucketts, Va.
 Bowyer, Ernestine C., Washington, D. C.
 Boyle, John B., Jr., Baltimore
 Bradley, Robert J., Hyattsville
 Brainerd, William F., III, Towson
 Brannock, Harold S., Washington, D. C.
 Brelsford, Jean R., Jr., Berwyn
 Brigham, David L., Ashton
 Brinckerhoff, John G., Chevy Chase
 Broadwater, Norman I., Jr., Oakland
 Brown, Allan H., University Park
 Brown, Vernon L., Landover
 Bryant, Roswell A., Jr., Takoma Park
 Buchbinder, Robert H., Bayonne, N. J.
 Buck, Marjorie M., Indian Head
 Burk, Joseph, Linthicum Heights
 Burrows, Milford D., Washington, D. C.
 Byers, Lloyd D., Catonsville
 Capossela, Thomas J., Washington, D. C.
 Carpel, Albert J., Washington, D. C.
 Cary, Charles G., Riverdale
 Case, Richard W., Berwyn
 Charuhas, George P., Cumberland
 Checket, Irene R., Baltimore
 Chumbris, Angelos N., Washington, D. C.
 Chumbris, Cleom G., Washington, D. C.
 Clark, John T., Greensboro
 Clayman, Stanley, Washington, D. C.
 Cleaver, William F., Washington, D. C.
 Close, Horace W., Washington, D. C.
 Coe, Paul M., Washington, D. C.
 Cohen, Samuel, Washington, D. C.
 Cole, William H., Baltimore
 Collins, Garner F., Rockville
 Collins, Roberta E., Hyattsville
 Comer, Florence R., Hyattsville
 Cook, Charlotte C., Washington, D. C.
 Cook, Harry I., Hyattsville
 Cooke, Alfred A., Hyattsville
 Cornnell, Ellner A., Cottage City
 Costello, Peter E., Baltimore
 Crisafull, Joseph, Washington, D. C.
 Cross, Roy E., Chevy Chase
 Cullen, Russell H., Hyattsville
 D'Adamo, Charles, Baltimore
 daCruz, Francis, Washington, D. C.
 Dantzig, Henry, Hyattsville
 Davidson, Oscar M., Baltimore
 Davis, Harry L., Baltimore
 Davis, Warren P., Washington, D. C.
 Demaree, Nancy B., College Park
 Denney, James B., Bladensburg
 DeVor, George A., Silver Spring
 Dieudonne, Erasmus L., Jr., Bladensburg
 Dippel, Francis X., Baltimore
 Dobres, Robert M., Baltimore
 Durity, Harry L., Marlboro
 Durnell, James R., Bethesda
 Dwiggin, Roscoe D., College Park
 Egnell, Edward W., New Brighton, N. Y.
 Edlavitch, Robert, Hyattsville
 Edmonds, William R., Baltimore
 Ehrmantraut, John M., Brentwood
 Eichlin, Doris E., Washington, D. C.
 Eierman, George H. P., Baltimore
 Ellis, William E., Baltimore
 Ely, Charles T., Washington, D. C.
 Ermold, John G., Ellicott City
 Evans, Frank D., Chevy Chase
 Evans, Lydia M., Chevy Chase
 Eyler, Mervin S., Taneytown
 Faul, R. Virginia, Washington, D. C.
 Findlay, William F., Cumberland
 Fox, Ava S., Chestertown
 Franklin, Joseph G., Hyattsville—Unc.
 Fraser, Donald L., Washington, D. C.
 Fraser, Doris E., Takoma Park
 Freseman, Richard D., Mars, Pa.
 Freemire, Elmer L., Takoma Park
 Frey, Louis M., Mt. Rainier
 Fulks, Moir M., Rockville
 Ganzert, Mary L., Washington, D. C.
 Gast, John P., Cheverly—Unc.
 Geiser, Jesse B., College Park
 George, Frank H., Baltimore—Unc.
 Gifford, John F., Washington, D. C.
 Glynn, Gwendolyn M., Stratford, Conn.
 Goldberg, Alvin, Brooklyn, N. Y.
 Goldman, Gabriel, Baltimore
 Goldman, Leon, Washington, D. C.
 Goodlett, Max W., Washington, D. C.
 Gough, James J., Chaptico
 Gram, Edith-Marie, Washington, D. C.
 Grant, Charles R., Jr., Chevy Chase
 Gratz, Ezra B. A., Brooklyn, N. Y.
 Greenbaum, Irwin, Newark, N. J.

Grodjesk, Joseph E., Baltimore
 Groff, William D., Jr., Owings Mills
 Grotlich, Louise K., Silver Spring
 Gulbrandsen, Oskar S., Baltimore
 Hardy, Carol T., Hyattsville
 Hardy, Jerome S., Silver Spring
 Harris, Herman L., Baltimore
 Harrison, John R., Hyattsville
 Haydon, Margaret J., Hyattsville
 Hellman, Myra, Lawrence, N. Y.
 Hellweg, Vincent P., Washington, D. C.
 Hemphill, Aloysius L., Silver Spring—Unc.
 Hemsley, Hugh H., Washington, D. C.
 Henderson, Adrienne M., Chevy Chase
 Hennies, Mary L., Chester, S. C.
 Henry, Frances L., Washington, D. C.
 Herbert, Joseph G., Washington, D. C.
 Hester, Jean C., Washington, D. C.—Unc.
 Hirsch, Albert, Frederick
 Hirsh, Harold L., Washington, D. C.
 Holt, Mary E., Washington, D. C.
 Hooton, Kittie M., Hyattsville
 Hoover, Lawrence G., Takoma Park
 Hortman, William F., Jr., Washington, D. C.
 Houck, Roland V., Vineland, N. J.
 Hoyle, Jack G., Washington, D. C.
 Hudson, Sally A., Washington, D. C.
 Hunter, Frances E., Chevy Chase
 Hurley, John J., Landover
 Hurley, Walter V., Jr., Hyattsville
 Iager, Evelyn L., Bay Ridge
 Ireland, Julius W., Baltimore
 Irwin, Robert C., Lyndhurst, N. J.
 Isis, Philip S., Washington, D. C.
 Jacobs, Robert A., Rockaway Beach, N. Y.
 James, Helen M., Chevy Chase
 Jarboe, James P., Bel Alton
 Jensen, Willard C., Washington, D. C.
 Jett, Geraldine V., Chevy Chase
 Johnson, Henry C., Washington, D. C.
 Johnson, Vivian H., Baltimore
 Jones, Robert M., Baltimore
 Jordan, Margaret A., Hyattsville—Unc.
 Joseph, David R., Stamford, Conn.
 Kaplan, Solomon, Baltimore
 Katz, Albert I., Washington, D. C.
 Kaufman, Millard, Baltimore
 Keefer, Ruth L., Takoma Park
 Keister, Helen D., Hyattsville
 Keller, Joseph E., Washington, D. C.
 Kephart, Mary E., Taneytown
 Keppler, Millicent M., Washington, D. C.
 Kirkpatrick, Miriam A., Trenton, N. J.—Unc.
 Kline, Horace F., Frederick
 Kraemer, Edwin, Hackensack, N. J.
 Kramer, Florence H., Baltimore

Krynitsky, John A., Chevy Chase
 Ladson, Marcia, Rockville
 Lang, Grace M., Passaic, N. J.
 Langmaid, C. Russell, Washington, D. C.
 Langschmidt, Edward G., Relay
 Lanigan, James M., Washington, D. C.
 Lankford, Stephen E., Washington, D. C.
 Lapidus, Stanley J., Baltimore
 Lavine, Isidor M., Mt. Rainier
 Lear, Paul D., Jr., Cumberland
 Ledoux, Landreville, Jr., Quantico, Va.
 Leasure, Robert L., Silver Spring
 Lee, Whiting B., Hyattsville
 Lesser, Alfred I., Newark, N. J.
 Levenson, Bertha, Baltimore
 Levin, Harriet A., Baltimore
 Levine, Ethel, Brooklyn, N. Y.
 Levine, Milton, Baltimore
 Lewald, James H., Laurel
 Lilge, Louis M., Washington, D. C.—Unc.
 Linthicum, George E., Jr., Baltimore
 Liskey, Robert B., Hagerstown
 Lloyd, Merrill L., Norfolk, Va.
 Long, Edwin D., Westover
 Lyon, Elnora L., Baltimore
 MacDonald, Charles R., Cumberland
 Machen, Hervey G., Hyattsville
 Maer, Wallace N., Elizabeth, N. J.
 Maguire, John N., Penns Grove, N. J.
 Maris, Helen B., Riverdale
 Markley, Robert R., Baltimore
 Maslin, Margaret L., Port Chester, N. Y.
 Matelson, Joseph, Washington, D. C.
 Mattingly, Lawrence J., Washington, D. C.
 Mattoon, Laura I., Takoma Park
 McCall, Harriett A., College Park—Unc.
 McCann, George E., Jr., Washington, D. C.
 McClay, Harriette N., Hyattsville
 McClayton, M. Elaine, Baltimore
 McConnaughy, Robert L., Berwyn
 McFarlane, Samuel B., Lonaconing
 McGinniss, Harry, Kensington
 McKeever, Regina W., Silver Spring—Unc.
 McLean, Anne, Pennington, N. J.
 McNaught, John P., Perry Point
 McNicholas, Marie K., Washington, D. C.
 McNutt, M. Tyler, Collingswood, N. J.
 Mears, Thomas W., Washington, D. C.
 Meenehan, M. Frank, Washington, D. C.
 Mehl, Joseph M., Jr., Washington, D. C.
 Mellen, Luther E., Jr., Baltimore
 Melnicove, Miriam N., Baltimore
 Meng, Ralph H., Perry Point
 Mertie, Robert B., Silver Spring
 Meyers, Melvin H., Hagerstown
 Michelson, Elaine P., Baltimore
 Miller, John W., Boonsboro—Unc.
 Miller, Walter L., Washington, D. C.

Miller, William I., Baltimore
 MisKimon, Raymond M., Baltimore
 Mitchell, Alfred G., Baltimore
 Mitchell, Doris J., Baltimore
 Mobley, Edward L., Hagerstown
 Moise, Davis D., Sumter, S. C.
 Morton, Helen C., Silesia
 Myllo, Stanley W., Linthicum Heights
 Nattans, Ralph A., Baltimore
 Needle, Barnett M., Washington, D. C.
 Neilson, Robert S., Baltimore
 Neiman, Robert M., Mt. Vernon, N. Y.
 Nevy, Inez A., Cumberland
 Newell, Robert T., Jr., Centreville
 Norman, Richard E., Hyattsville
 Odebrecht, Mary M., Takoma Park
 O'Neill, Richard J., Baltimore
 Oursler, Griffith B., Clinton
 Page, John F., Baltimore
 Panciotti, Michael, Derby, Conn.
 Parks, John A., Cumberland
 Person, Gladys M., Chevy Chase
 Pickens, James L., Washington, D. C.
 Piozet, Dolores A., Hyattsville
 Pitzer, James E., Cumberland
 Plum, John P., Cumberland
 Powell, Alice L., Berwyn
 Powell, William A., Baltimore
 Pratt, Stanford C., Washington, D. C.
 Preston, Thomas T., Jr., Joppa
 Prettyman, Dan T., Trappe
 Price, Robert S., Catonsville
 Quinn, Thomas J., Providence, R. I.
 Quitt, Herman, Baltimore
 Rabai, Ermine J., Baltimore—Unc.
 Rabak, Richard W., Washington, D. C.
 Rabinowitz, Alex, Brooklyn, N. Y.
 Raisin, Herman S., Brooklyn, N. Y.
 Reeser, Doris W., Washington, D. C.
 Reeser, Victor K., Washington, D. C.
 Reindollar, Helen L., Baltimore
 Remsburg, Charles G., Berwyn
 Resnick, Solomon, Bayonne, N. J.
 Rice, Floyd E., Takoma Park
 Rieg, Mary, Washington, D. C.
 Ripple, Roland C., Cheltenham
 Robinson, Gordon S., Patchogue, N. Y.
 Robinson, Joseph M., Cardiff
 Rochkind, Joseph M., Baltimore
 Rogers, Hatton B., Jr., Washington, D. C.
 Rosen, Martin, Fort Salonga, L. I., N. Y.
 Rouse, Edgar B., Baltimore
 Rozzelle, David E., Bethesda
 Rudolph, Herbert I., Baltimore
 Sadowsky, Wallace H., North East
 St. Clair, Jean, College Park
 Schaufele, Walter J., Jr., Fullerton
 Schindler, Elaine, Baltimore

Schneider, Howard, Yonkers, N. Y.
 Schrott, John D., Washington, D. C.
 Schutz, Patricia S., Annapolis
 Schulte, William G., Baltimore
 Schwartz, Norton B., Spring Valley, N. Y.
 Schweitz, Edwin P., Washington, D. C.
 Scott, Mary J., Hyattsville
 Secrest, John P., Brentwood
 Seidel, David L., Takoma Park
 Seitz, Charles E., Glen Rock, Pa.
 Sesso, Raymond F., Washington, D. C.
 Shaffer, Arthur J., Washington, D. C.—Unc.
 Shaffer, Hugh M., Cumberland
 Shaw, Edward L., Chevy Chase
 Shegogue, Mac M., Landover
 Sheriff, Roger E., Landover
 Sherman, Della E., Baltimore
 Sherzer, Charles L., Jr., Washington, D. C.
 Shmuner, Daniel P., Baltimore
 Silberg, I. Walter, Baltimore
 Silverstein, David, Belmar, N. J.
 Simms, William G., Washington, D. C.—Unc.
 Simon, Fred L., Baltimore
 Sindler, Samuel R., Baltimore
 Slote, Herbert W., Brooklyn, N. Y.
 Smith, Edward A., Washington, D. C.
 Solomon, Muriel, Charleston, S. C.
 Smith, Thomas L., Baltimore
 Soule, Floyd A., Washington, D. C.
 Spiegelglass, Harriett H., Hackensack, N. J.
 Stapf, Austin M., Relay
 Stark, Alice D., Aberdeen
 Stedman, Samuel F., Baltimore
 Stegmaier, James G., Cumberland
 Steinberger, Janet I., Baltimore
 Stokes, Samuel R., Washington, D. C.
 Stuart, Phyllis M., Washington, D. C.
 Stup, Charles R., Frederick—Unc.
 Sweitzer, Edward H., Baltimore
 Taylor, Thomas G., Baltimore
 Trazzare, Doris L., Denton—Unc.
 Treacy, John T., Oakland
 Trice, Frederic W., Preston
 Trundle, Lula S., Ashton
 Tucker, Beatrice L., Abingdon
 Turner, Katherine L., Washington, D. C.
 Tyler, Homer H., Hagerstown
 Updike, Edna M., Washington, Va.
 Upham, Charles M., Jr., Marbury
 VanHorn, Robert P., Glenn Dale
 Vaught, Cecelia J., Riverdale
 Vogt, John F., Catonsville
 Waddill, Roland A., Washington, D. C.
 Wade, Robert L., Halethorpe
 Waingold, George, Cumberland
 Waite, Malden D., Odenton

Walsh, William C., Tilghman
 Waters, Robert W., Princess Anne
 Watkins, Jack H., Aberdeen
 Weber, June E., Washington, D. C.—Unc.
 Weber, Sylvia E., Brooklyn, N. Y.
 Weinberg, Bernice R., Baltimore
 Weinblatt, Mayer, Baltimore
 Weinreb, Seymour, Washington, D. C.
 Weiser, Theodore T., Brooklyn, N. Y.
 Wellinger, Phyllis M., Hagerstown
 Wharton, Edward M., College Park
 Williamson, Martha L., Catonsville
 Wilson, Robert G., Washington, D. C.
 Wilson, Thomas L., Havre de Grace

Winter, Joseph S., Washington, D. C.
 Witzke, Leroy M., Baltimore
 Wolf, Frances W., Washington, D. C.
 Wohlmuth, Doris E., Atlantic City, N. J.
 Wood, Albert K., Catonsville
 Wood, Charles L., Bethesda
 Wood, Robert W., New York, N. Y.—Unc.
 Wood, William F., Washington, D. C.
 Wyatt, Henry F., Baltimore
 Wyant, Adam M., Greensburg, Pa.
 Yochelson, Bernard A., Washington, D. C.
 Young, Herbert S., Washington, D. C.
 Zimmerman, Loy M., Baltimore

UNCLASSIFIED AND PART TIME

Babylon, Thomas C., Westminster
 Bruns, Lawrence A., Relay
 Campbell, Charles R., Landover
 Gauss, Lenna O., Washington, D. C.

Magdeburger, Elvira, Washington, D. C.
 Mitnick, Harry, Baltimore
 Schiff, Adelaide S., Allentown, Pa.
 Turner, Raymond E., Takoma Park

SCHOOL OF DENTISTRY

SENIOR CLASS

Andreorio, Patrick Louis, Morristown, N. J.
 Arends, Theodore George, Washington, D. C.
 Baylin, George Jacob, Baltimore
 Blanchard, Kenneth Earl, Waterbury, Conn.
 Bonante, John Andrew, Sykesville, Pa.
 Brodie, Leo, New York, N. Y.
 Brotman, Irwin Norton, Baltimore.
 Brown, Herbert Samuel, Stamford, Conn.
 Buppert, Stuart George, Baltimore.
 Carrill, Howard Allen, Smithsburg.
 Centanni, Alfonse Guide, Newark, N. J.
 Cooper, Herman Milton, Hackensack, N. J.
 Corbin, Lance Nathaniel, Bel Air.
 Corthouts, James Leopold, Hartford, Conn.
 Cronin, John William, Sparrows Point.
 Decesare, William Frank, Providence, R. I.
 DiGristine, Michael Joseph, Baltimore.
 Dionne, Eugene Joseph, New Bedford, Mass.
 Donohue, Terrence David, Baltimore
 Evans, Marvin Ratledge, Clemmons, N. C.
 Fischer, William August, Baltimore.
 Friedman, Samuel, Bridgeport, Conn.
 Glaser, Isadore, New York, N. Y.
 Goldberg, Solomon, Hartford, Conn.
 Greenberg, Alvin A., Baltimore.
 Hampson, Robert Edward, Baltimore.
 Hanik, Samuel, Paterson, N. J.
 Harris, Lawrence, Paterson, N. J.
 Hawley, Carlotta Augusta, Washington, D. C.
 Hodges, Ralph Warren, North Providence, R. I.

Hoffman, Elmer Norman, Baltimore.
 Horowitz, Morris, East Orange, N. J.
 Hunter, Donald Scott, Baltimore.
 Impresa, Michael, Waterbury, Conn.
 Inman, Byron Wallace, Mount Airy, N. C.
 Jerome, Bernard, Union City, N. J.
 Johnston, Samuel Burke, III, Dover, N. J.
 Kaufman, Vernon Delbert, Baltimore.
 Klotz, Otto Guido, Gloucester, N. J.
 Kreshtool, Louis, Wilmington, Del.
 Kress, William, Baltimore.
 Kuta, Bruno Leon, Newark, N. J.
 Lacher, Henry Arthur, Baltimore.
 Leahy, Roland Paul, Franklin, N. H.
 Levinson, Louis, Washington, D. C.
 Levy, Meyer Lewis, Newark, N. J.
 McCauley, Henry Berton, Jr., Baltimore.
 Metz, Joseph Francis, Jr., Baltimore.
 Meyer, Everett Nelson, Bridgeport, Conn.
 Milobsky, Louis, Washington, D. C.
 Mitten, Harry William II, Balboa, Canal Zone.
 Muller, Frank Harry, Woodbury, N. J.
 Myers, James Richard, Westminster.
 Myers, Norman Frederick, Edgewood.
 Nelson, Walter Josef, Providence, R. I.
 Niebergall, Gerald Maher, Hackensack, N. J.
 Orman, Herbert, Baltimore.
 Paskell, Ray Sidna, Cumberland.
 Philpot, William Charles Christopher, Jr., Elizabeth, N. J.
 Racicot, Ralph Raymond, Webster, Mass.

Riddlesberger, Merklein Mills, Waynesboro, Pa.
 Rogler, Wesley Edward, Weehawken, N. J.
 Rosen, Harold, West Norwood, N. J.
 Sabloff, Herbert, East Orange, N. J.
 Schoenbrun, Alexander, Passaic, N. J.
 Schwartz, Daniel David, Paterson, N. J.
 Seyfert, Ernest Gustave, Stratford, Conn.
 Shackelford, John Hinton, Beverlyville, Va.
 Shapiro, Abe Alvin, Washington, D. C.
 Shipman, Lewis Hamilton, Worcester, Mass.
 Silverman, Edward, Elizabeth, N. J.
 Sullivan, William Francis, Windsor Locks, Conn.

JUNIOR CLASS

Aks, Harry, Norfolk, Va.
 Barsky, Sol, Washington, D. C.
 Beetham, Curtis Muse, Baltimore.
 Berkowitz, Bernard Robert, Baltimore.
 Berman, Irving, New Haven, Conn.
 Burton, Wilbur Darwin, Jr., Dover, Del.
 Byer, Joseph, Trenton, N. J.
 Caputo, Anthony Victor, Newark, N. J.
 Casey, William Raymond, Pawtucket, R. I.
 Clewlow, Albert Thomas, Atlantic City, N. J.
 Colby, Maurice Rubin, Long Branch, N. J.
 Davis, Henry, Baltimore.
 Davis, Mark O., Jr., Washington, D. C.
 Downes, Kenneth Forsythe, Hartford, Conn.
 Downs, Joseph Lawrence, Jersey City, N. J.
 Eamich, Richard James, Washington, D. C.
 Edwards, Melvin Frederick, Belford, N. J.
 Finkelstein, Louis Benjamin, Newark, N. J.
 Fox, Isadore Edward, Atlantic City, N. J.
 Friedberg, Herbert, Atlantic City, N. J.
 Fulmer, James Ambrose, Jr., Fountain Inn, S. C.
 Gare, Morris Ralph, Newark, N. J.
 Gaudreau, Raymond Joseph, Sayesville, R. I.
 Glick, George Harold, Passaic, N. J.
 Greenberg, Jesse Jerome, Brooklyn, N. Y.
 Gregoire, Gaetan Georges, Moosup, Conn.
 Heck, John Conrad, Baltimore.
 Heuser, Victor Lemoine, Glen Ridge, N. J.
 Hirshorn, Abraham, Camden, N. J.
 Jacobs, Vivian M. J., Harrison, N. J.
 Jones, Donald Beebe Booth, Takoma Park.
 Kanelos, Peter Theodore, Providence, R. I.
 Kuperstein, Charles B., Philadelphia, Pa.
 Lavine, Harold Harry, Mt. Rainier.
 Leonard, Melvin Ralph, Chincoteague, Va.
 Lessow, Harold Jack, Hartford, Conn.
 Levin, David Aaron, Baltimore.

Switzer, John Robert, Jr., Harrisonburg, Va.
 Tarant, Leonard Joseph, Newark, N. J.
 Trupp, Garrison, Baltimore.
 Tully, Edward Albert, West Hartford, Conn.
 Tyburski, Frank Casimir, Derby, Conn.
 Walker, James Arthur, St. Johnsbury, Vt.
 Walsh, William Thomas, St. Johnsbury, Vt.
 Weinstein, Herbert Milton, Union City, N. J.
 Wien, Robert, Newark, N. J.
 Zea, Alvaro, Colombia, S. A.

Levitas, Guilford, Westwood, N. J.
 Lubarsky, Milton Seth, Philadelphia, Pa.
 Ludwig, Roderick Joseph, Bridgeport, Conn.
 Lupshutz, Bernard Melvin, Washington, D. C.
 Markos, Simon George, Dover, N. H.
 McLean, Harry, Cumberland.
 Miksinski, Boleslaw Walter, Jr., Baltimore.
 Miller, Robert Greer, Baltimore.
 Mirabella, Joseph Anthony, Jr., Newark, N. J.
 Moorefield, Paul Boyd, Mount Airy, N. C.
 Myers, Ernest Linwood, Frederick.
 Nacrelli, Chris Anthony, Marcus Hook, Pa.
 Poster, Benjamin Leonard, Baltimore.
 Pugh, Gordon Scott, Baltimore.
 Ralph, Joseph Emile, Keyport, N. J.
 Reed, Robert Alton, Milford, Del.
 Reilly, Bernard Henry, Central Aguirre, Puerto Rico
 Reynolds, Jotham Gay, Waterbury, Conn.
 Richardson, Richard Edgeworth, Leaksville, N. C.
 Riggins, Harry Ewell, Crisfield.
 Roh, Frank John, Baltimore.
 Rosen, Irving, Norfolk, Va.
 Salvatore, Joseph Zeoli, Bristol, Conn.
 Seidler, Alonzo LePage, Towson.
 Shobin, Jack, Baltimore.
 Shure, Maurice David, New Haven, Conn.
 Silverstein, William Herman, Woodcliff, N. J.
 Simington, William Bower, Danville, Pa.
 Simon, Morris David, Clifton, N. J.
 Sloan, Isaac, Dunbar, W. Va.
 Swinehart, Darwin Robert, Baltimore
 Sydney, Elmer Louis, Providence, R. I.
 Yoffe, Gilbert, Baltimore.
 Zeiner, Raymond Edward, Torrington, Conn.
 Zerdy, Alfonse Walter, New Philadelphia, Pa.

SOPHOMORE CLASS

Aaron, Alvin, Biddeford, Maine.
 Aaronson, Fabius Fox, Washington, D. C.
 Asbell, Milton Baron, Camden, N. J.
 Bailey, Carl Elliott, Baltimore.
 Baker, Edward Keefer Jr., Pikesville
 Barker, John Paul, Laurel.
 Barnes, Bradley Bingham, Maplewood, N. J.
 Boro, Alex Louis, Severna Park
 Bozzuto, John Michael, Jr., Waterbury, Conn.
 Cabler, James Titus, Baltimore.
 Cammarano, Frank Peter, New Haven, Conn.
 Carrigan, Harold Joseph, Jersey City, N. J.
 Cohen, Sigmund, Baltimore.
 Connell, Edward William, Norwich, Conn.
 Cooper, David, Atlantic City, N. J.
 Cramer, Paul Edward, Monessen, Pa.
 Cruik, Edwin Deller, Poolesville.
 Donofrio, Richard Salvatore, Danbury, Conn.
 DuBoff, Leonard, West Hartford, Conn.
 Erlich, William, Baltimore.
 Eskow, Alexander Bernard, Perth Amboy, N. J.
 Falk, Wilbur Nelson, Branford, Conn.
 Farrington, Charles Calhoun, Chelmsford, Mass.
 Ferguson, Norman, Washington, N. C.
 Finegold, Raymond, Belmer, N. J.
 Gemski, Henry John, New Haven, Conn.
 Giuditta, Nicholas Richard, Jr., Westfield, N. J.
 Goe, Reed Thomas, Weston, W. Va.
 Habercam, Julian Wetmore, Baltimore.
 Haggerty, Jack Stanley, Sussex, N. J.
 Hartwell, Perley Burton, Jr., St. Johnsbury, Vt.
 Heil, Roland William, Baltimore.
 Johnson, William Basil, Jr., Annapolis.
 Johnston, Arthur James, Providence, R. I.

Jonas, Charles Saul, Atlantic City, N. J.
 Joyce, Osler Collinson, Baltimore
 Kraus, George Carl, Baltimore.
 Lasley, Frank A., Jr., Staunton, Va.
 Lau, Irvin Martin, Jr., York, Pa.
 Levin, Leonard Lee, Norfolk, Va.
 Liberman, Sidney E., Baltimore.
 Lyon, Eugene Davisson, Baltimore.
 Margulies, David Benjamin, Linden, N. J.
 Marsh, Edmond Formhals, North Adams, Mass.
 Massucco, Lawrence Philip, Bellows Falls, Vt.
 Mathias, Craig Prescott, Waynesboro, Pa.
 McCausland, Charles Patterson, Baltimore.
 McMillin, Clarence Vaden, Campobello, S. C.
 Meadows, Stanley J., Brunswick.
 Mendelsohn, Harry Benjamin, Norfolk, Va.
 Messner, Jack Menefee, Washington, D. C.
 Morris, Hugh Beryl, Baltimore.
 Muller, Edward Joseph, Bayonne, N. J.
 Myer, Edward Herman, Jr., Mahwah, N. J.
 Neal, Floyd Warren, Southington, Conn.
 Noon, William Joseph, Jr., Providence, R. I.
 Rich, Otto Morris, New Brunswick, N. J.
 Roitman, Irvin, Trenton, N. J.
 Ryan, William Henry, Frostburg.
 Saltman, David, Holyoke, Mass.
 Silverman, Stanley Gabriel, Portsmouth, Va.
 Slavinsky, Edwin Anthony, Baltimore
 Smyth, Lawrence Curtis, Quincy, Mass.
 Stepan, Jerry James, Baltimore.
 Stewart, Ford Atwood, Baltimore.
 Theodore, Raymond Marwin, Baltimore.
 Turok, Seymour, Passaic, N. J.
 Weigel, Sterling John, York, Pa.
 Westerberg, Carl Victor, Simsbury, Conn.
 Wheeler, Elias Ogden, Lynchburg, Va.
 Williams, Ernest Vincent, Washington, D. C.

FRESHMAN CLASS

Allen, Joseph Paul, North Martinsville, W. Va.
 Auerbach, Bernard Berry, Baltimore
 Barsamian, Samuel, Providence, R. I.
 Bernstein, Norman Nathaniel, Washington, D. C.
 Blais, Raymond Holyoke, Mass.
 Blevins, George Coffman, Centerville
 Brown, Frank Anderson, Lansdowne
 Cannaday, Henry Lee, Roanoke, Va.
 Carvalho, Antone Richard, New Bedford, Mass.

Chan-Pong, Bertrand Oswald, Trinidad, B. W. I.
 Connolly, John Alvin, Baltimore
 Davis, Francis Cecil, Bader, Pa.
 Davis, James Clarke, Silver Spring
 Dorfman, Joseph Sol, Washington, D. C.
 Dubansky, Paul Samuel, Baltimore
 Dunn, Naomi Ada, New Britain, Conn.
 Edgar, Benjamin Delbert, Viola, Ill.
 Eichenbaum, Irving William, New Haven, Conn.
 Fallon, Charles Huff, Trenton, N. J.

Feindt, William Becker, Baltimore
 Francis, Garnet Paul, Jr., Alexandria, Va.
 Gane, Eugene Michael, Hartford, Conn.
 Gilden, Paul, Baltimore
 Goldstein, Leonard Nathan, Hartford, Conn.
 Gorsuch, Gilbert Franklin, Sparrows Point
 Griesbach, Hans Henry, Naugatuck, Conn.
 Grove, Harry Clyde, Jr., Fairplay
 Hirschman, Leonard Marvin, Baltimore
 Hoffacker, Henry Jacob, Hanover, Pa.
 Jacoby, Robert Ellsworth, Halethorpe
 Jakob, Robert, Norwalk, Conn.
 James, Verda Elizabeth, Milford, Del.
 Johnson, Walter Edgar, Berlin, N. H.
 Kader, Marshall Irvin, Baltimore
 Krug, Frederick Robert, Baltimore
 Labasauckas, Charles Frank, Watertown, Conn.
 Lavoie, Odilon Joseph, Jr., Southbridge, Mass.
 Legum, Isidore, Baltimore
 Lisker, Nathan, Providence, R. I.
 Maislen, Irving Lawrence, Hartford, Conn.
 McConnell, William Lewis, West Union, W. Va.
 McCracken, Jules, Cameron, W. Va.
 Meinster, Leon H., Baltimore
 Melson, William Franklin, Wilmington, Del.

PRE-DENTAL CLASS

Beaven, Sterrett Patterson, Baltimore
 Berman, Daniel Elihu, Baltimore
 Caldwell, Gilbert Lee, Baltimore
 Cavallaro, Ralph Carmine, Branford, Conn.
 Chmar, Phillip Lee, Rockville
 Cohen, Jerome Sylvan, Baltimore
 Farrell, Lawrence Daniel, Norwich, Conn.
 Frey, Donald Tiemeyer, Catonsville
 Goldhaber, Samuel, Flushing, Long Island, N. Y.
 Goodwich, Louis, Waterbury, Conn.
 Gurny, Henry Frank, Baltimore
 Haynes, Frank Preston, Baltimore
 Hewitt, Earl Christian, Baltimore
 Kennedy, Walter Edward, Baltimore
 Lawler, Vincent Joseph, Baltimore

Lawrence, Ronald, Elk Mills
 Levinson, Cecil Abraham, Baltimore
 Link, Etta Carolyn, Halethorpe
 Marshall, Lolah Harrington, Baltimore
 Mayes, Irvin Curtis, Jr., Phoenix
 Maynard, Elmer John, New Britain, Conn.
 McClees, Joseph Govane, Baltimore
 McDaniel, Edward Paul Jr., Jarrettsville
 Merendino, Albert Peter, Baltimore
 Perentesis, Christopher, Baltimore
 Pettit, Burnett Alexander, Baltimore
 Rudo, Frederick Bernard, Raspeburg
 Sanner, James Harris, Jr., Phoenix
 Schultheis, Carl Haid, Baltimore
 Smith, Bernard, Hagerstown
 Storch, Murray, Passaic, N. J.

COLLEGE OF EDUCATION

SENIOR CLASS

Andorka, William, Lorain, O.
 Asero, John J., Washington, D. C.
 Beall, William R., Hyattstown
 Beitler, Mary E., Relay
 Benner, Willis A., Washington, D. C.
 Brechbill, Edith L., College Park

Byers, John G., Lonaconing
 Conner, Virginia, Hagerstown
 Downs, Glendora M., Williamsport
 Duvall, Wilbur I., Gaithersburg
 Edmunds, Lois T., Washington, D. C.
 Edwards, Velma B., Riverdale

Evans, Warren R., Bladensburg
 Fisher, Mary C., Rockville
 Ford, M. Mell, Abingdon
 Friedman, David, Silver Spring
 Hande, Dorothy E., Baltimore
 Herbsleb, Jack M., Washington, D. C.
 Hickey, Routh V., Popes Creek
 Keller, Mary C., Washington, D. C.
 Kenny, Catherine P., Quogue, N. Y.
 Lohr, Walter G., Baltimore
 Lustbader, Isadore W., Baltimore
 Lyddane, Blanche L., Washington, D. C.
 Matthews, Robert H., Jr., Cambridge
 Mayhew, Polly H., Hyattsville
 McComas, Laura A., Abingdon
 McFarland, Cathryn E., Cumberland
 Merrill, William E., Pocomoke City
 Morrison, Mary E., Bennings, D. C.
 Northrop, Everett H., Hagerstown
 Over, Ira E., Hagerstown
 Parker, Ruth E., Baltimore

Posey, Margaret A., La Plata
 Reuling, Fay I., Baltimore
 Rohr, Aileen M., Harpers Ferry, W. Va.
 Rowland, M. Jean, Washington, D. C.
 Sachs, George H., Washington, D. C.
 Sanford, Leora L., Chevy Chase
 Shank, R. Karl, Hagerstown
 Slye, Robert W., Washington, D. C.
 Small, Florence F., Hyattsville
 Smith, Dorothy, Hyattsville
 Soren, Milo W., Washington, D. C.
 Sticks, Edith L., Rockville
 Terhune, Kathryn M., Washington, D. C.
 Thompson, Elizabeth B., Daytona Beach, Fla.
 Turner, Evelyn C., Salisbury
 Turner, Virginia P., Salisbury
 Wall, Christine L., Catonsville
 Weld, John R., Sandy Spring
 Zerman, Claire E., Trenton, N. J.
 Zimmerman, James F., Frederick

JUNIOR CLASS

Barnsley, Jean, Rockville
 Bell, Edith U., Williamsport
 Berman, Bertrand S., Baltimore
 Bowen, Gertrude E., Bennings, D. C.
 Bradford, Evelyn M., Towson
 Brown, Elizabeth D., Washington, D. C.
 Buhrow, Viola M., Brentwood
 Burtner, Rosemary J., Boonsboro
 Cartee, Janet L., Hagerstown
 Chatham, Jeanette F., Salisbury
 Cochran, A. Mildred, Takoma Park
 Crisp, Mary B., Baltimore
 Davis, Robert E., Washington, D. C.
 Doub, June B., Hagerstown
 Farrell, Albert B., Washington, D. C.
 Fatkin, Marshall W., Luke
 Forsyth, Blanche E., Friendsville
 Gebelein, Conrad G., Baltimore
 Gretz, Harry B., Washington, D. C.
 Hall, Thomas W., Bel Air
 Headley, L. Coleman, College Park
 Henley, Robert C., Washington, D. C.
 Hepler, M. Eleanor, Harrisburg, Pa.
 Higgins, Marjorie A., Hurlock
 Humelsine, Carlisle H., Hagerstown
 Jimmyer, John K., Baltimore
 Kreiter, Ruth, Washington, D. C.
 Lane, M. Helen, Goldsboro
 Laws, Lucile V., Silver Spring

SOPHOMORE CLASS

Ayers, Alice J., Barton
 Bayley, John S., Baltimore
 Beal, Anne A., Washington, D. C.
 Birkland, John V., Washington, D. C.

Lightfoot, Georgiana C., Takoma Park.
 Lombardo, Michael A., Newark, N. J.
 Melchior, Donald F., Baltimore
 Merritt, H. Virginia, Dundalk
 Minker, Dorothy, Washington, D. C.
 Nordeen, Eleanor C., Mt. Rainier
 Norris, Elizabeth M., Washington, D. C.
 Parker, Harry E., East New Market
 Pence, Mary, Conway, Ark
 Pfeiffer, Paul E., Annapolis
 Pusey, J. Frank, Delmar, Del.
 Ryan, Michael J., Jr., Washington, D. C.
 Schwartz, Mortimer, New York, N. Y.
 Scop, Abraham, Catonsville
 Shaw, Roberta F., Stewartstown, Pa.
 Shmuner, Anne, Baltimore
 Smith, S. Margaret, Bel Air
 Stalfort, Carl G., Baltimore
 Stratmann, Elsie A., Sparrows Point
 Sugar, Beatrice, St. Pauls, N. C.
 Swanson, Harry R., Washington, D. C.
 Talcott, Lois L., Washington, D. C.
 Tax, Jeremiah J., Brooklyn, N. Y.
 Teal, Dorcas R., Hyattsville
 Williams, Margaret, Silver Spring
 Yaeger, Charles F., Jr., Baltimore
 Young, Carolyn R., Clintonville, Conn.
 Zulick, Charles M., Houtzdale, Pa.

Enderle, Ethel E., Glen Burnie
 Evans, Halbert K., Bladensburg
 Freas, Karl G., Silver Spring
 Fuss, Lucille A., Frederick
 Gearing, Jessie E., E. Falls Church, Va.
 Goldsmith, Cecelia E., La Plata
 Hamilton, Isabel, Hyattsville
 Hammett, James T., Leonardtown
 Harlan, Doris E., Silver Spring
 Heaps, Mary M., Cardiff
 Heffernan, Maryelene, Washington, D. C.
 Hobbs, Dorothy M., Silver Spring
 Jack, Margaret C., Rowlandville
 Jemison, Dorothy A., Washington, D. C.
 Katz, Lillian, Washington, D. C.
 Keller, Ralph W., Frederick
 Kellermann, Eileen A., Hyattsville
 Krumpach, Mary E., Luke
 Lee, Frank D., Baltimore
 Long, Elsie G., Marion
 Lovell, Grace R., Brentwood
 Lowry, Ruth V., Baltimore
 Marriott, Margaret, Washington, D. C.
 Maxwell, Edna C., Luke

FRESHMAN CLASS

Alperstein, Benjamin, Baltimore
 Anders, Anne F., Frederick
 Aud, William E., Poolesville
 Beamer, Francis X., Washington, D. C.
 Bennett, Gordon, Cambridge
 Bird, Jane deL., Sandy Spring
 Bishop, Betty J., Bethesda
 Bohlin, Mary H., Washington, D. C.
 Bowling, Thelma P., Faulkner
 Bowling, Virginia P., Wicomico
 Bowman, Anna K., Annapolis Junction
 Brokamp, Raymond W., Glen Burnie
 Browne, Mary E., Baltimore
 Burton, Beulah M., Washington, D. C.
 Byers, Ellsworth G., Lonaconing
 Callow, Charles E., Mt. Rainier
 Case, Sara V., Felton, Del.
 Coffey, Lillian S., Landover
 Crocker, Lillian E., Baltimore
 Cronin, Frank H., Joppa
 Cutting, Maude, Washington, D. C.
 Dennis, Margaret A., Berlin—Unc.
 Durrant, Robert E., College Park
 Forker, Jessie M., Brooklyn, N. Y.
 Fowble, Florence W., Reisterstown
 Freudenberger, John G., Baltimore
 Garman, Helen M., Washington, D. C.
 Garrott, Myrtle V., Knoxville
 Goldberg, Helen E., Kingston, N. Y.
 Grove, Georgia L., Riverdale
 Handler, Sylvia, Kingston, N. Y.
 Hardesty, Anna M., Newburg

Moore, Elizabeth A., Queen Anne
 Morgan, Alice S., Washington, D. C.
 O'Keefe, Bernice E., Rockville
 Polack, Bella R., Hagerstown
 Powell, Dorothy M., Dorsey
 Resnitsky, Isabel, Jersey City, N. J.
 Robinson, Grace E., Baltimore
 Shamberger, Ruth C., Baltimore
 Shipley, Cora L., Branchville
 Sinclair, Dorothy L., Washington, D. C.
 Smith, Ruth R., Washington, D. C.
 Sullivan, Ross H., Pleasantville, N. J.
 Surgent, Michael G., Eckley, Pa.
 Swanson, Margaret E., Washington, D. C.
 Trout, Dorothy V., Riverdale
 Weisberg, Bertha, Baltimore
 Weisberg, Maurice M., Baltimore
 Weller, Lucille B., Beallsville
 Wheeler, Elwood L., Glyndon
 Wheeler, Waverley J., Baltimore
 White, Elsie L., Washington, D. C.
 Wilson, Ruth E., Washington, D. C.
 Wiser, Vivian D., Branchville
 Wolfe, William C., Altoona, Pa.

Hayden, Byron T., Jr., Washington, D. C.
 Heaps, Laura F., Cardiff
 Howard, William F., Baltimore
 Huber, Nora L., Baltimore
 Iager, Helen L., Hyattsville
 Jeppesen, H. Louise, Lanham
 Jones, John S., Jr., Washington, D. C.
 Knepley, George W., Altoona, Pa.
 Kuhn, Eleanor M., Bethesda
 Landis, Phyllis A., Baltimore
 LeCompte, William S., Arbutus
 Males, Alexander, Pittsburgh, Pa.—Unc.
 Mangum, Shirley, Washington, D. C.—Unc.
 Mayes, Marian V., Phoenix
 Mayhew, Elizabeth A., Hyattsville
 McCarthy, John J., Washington, D. C.
 McChesney, Douglas W., University Park
 McLaughlin, Alice S., Hagerstown
 McNaughton, Edwina B., Washington, D. C.
 Meade, James G., Port Deposit
 Mileto, Catherine, Annapolis
 Morris, Joseph B., Port Deposit
 Murphy, Celia E., Walkersville
 Nichols, Lee H., Washington, D. C.
 Petersen, Olga C., Hyattsville
 Peurach, John S., Johnstown, Pa.
 Rawley, Mary E., Hyattsville
 Scharf, Thomas M., Glen Burnie
 Schmid, Harriet J., Erie, Pa.
 Shulman, Morris G., Washington, D. C.
 Smith, Blair H., Mt. Rainier

Smith, Mildred E., Walkersville
Sparling, Edith R., Washington, D. C.
Starlings, Cable P., Cheshire, Conn.
Stillings, Charles A., Baltimore
Stoddard, Sara L., Hyattsville
Sullivan, Evelyn L., Hyattsville
Tetlow, Robert M., Boyds
Townsend, Frances J., Riverdale

Trundle, Lucy W., Ashton
Unger, Fannie M., Hancock
Webster, Carolyn I., Pylesville
Weidinger, Charles W., Baltimore
Weinstein, Jerry B., Baltimore
Williams, Dorothy E., College Park
Wilson, Naomi L., Fulton
Wynn, Evelyn F., Washington, D. C.—Unc.

UNCLASSIFIED AND PART TIME

Alderton, Loretta P., College Park
Beall, Susie C., Beltsville
Bickmore, Helen D., Washington, D. C.
Bilbrough, Catherine R., Greensboro
Blundell, Mary A., Washington, D. C.
Bonner, Anna B., Hyattsville
Bowie, B. Lucille, La Plata
Bowie, Frances M., Berwyn
Burgess, Maurine D., Washington, D. C.
Carpenter, Virginia P., Washington, D. C.
Casbarian, Louise W., Hyattsville
Chatham, Elizabeth E., Salisbury
Clark, Ellen N., Silver Spring
Close, Marion B., Washington, D. C.
Craig, Madie E., Brentwood
Detwiler, F. J., Takoma Park
DeWilde, Jennie D., Preston
Diller, Frances M., Kensington
Downing, Elizabeth S., College Park
Dunn, May A., Hyattsville
Forshee, Edith D., Washington, D. C.
Gough, Katharine L., Laurel
Granbery, Helen L., Washington, D. C.
Griffiths, Leonard S., Baltimore
Grubbs, Birdie A., Washington, D. C.
Hardell, Nellie G., Washington, D. C.
Hearne, Ethel G., La Plata
Hess, Margaret S., Silver Spring
Hess, Palmer F., Silver Spring
Hiatt, Pearl M., Brentwood
Hickman, Mildred M., Washington, D. C.
Hiller, Clara, Washington, D. C.
Howard, Addie J., Hyattsville
Howard, Adrienne R., College Heights

Joyce, Agnes C., Washington, D. C.
Kasper, Helen M., Washington, D. C.
Keefauver, Helen R., College Heights
Kemp, Mary, College Park
King, Willamy S., Washington, D. C.
Lehr, Emily C., Bethesda
Lines, Helen J., Silver Spring
Lynch, Elizabeth S., Washington, D. C.
Martin, Grace W., Washington, D. C.
Martin, Miller L., Hyattsville
Matthews, Abigail G., La Plata
McCall, Mildred L., Washington, D. C.
Mudd, H. Virginia, Pomfret
Myers, Constance, Riverdale
Nolan, Edna P., Mt. Rainier
Pendleton, Charles H., Washington, D. C.
Perdue, Anna G., Snow Hill
Pultz, Kathryn E., Takoma Park
Queen, Helen H., Waldorf
Reich, Elinor G. J., La Plata
Reidy, Kathryn L., Chevy Chase
Sessions, Ruth W., Silver Spring
Shoemaker, Goldie G., Bethesda
Simmons, Ralph A., College Park
Simpson, Ruth M., Takoma Park
Sims, Olivia K., Rockville
Smoot, Mildred D., Kensington
Tarbett, Clara M., Takoma Park
Taylor, Mary M., Washington, D. C.
Turner, Emily B., Aquasco
Webb, Margaret O., Hyattsville
Whitt, Marie B., Washington, D. C.
Williams, Edith M., Washington, D. C.

EXTENSION TEACHERS-TRAINING COURSES

(INDUSTRIAL EDUCATION, Baltimore)

Albert, Dorothy E.
Annan, Clara L.
Arnold, Charles M.
Baer, Bankard F.
Baer, Harris
Ball, Frances
Bargteil, Ralph
Baughman, E. Elizabeth
Benner, Elisabeth
Benson, Mark

Bien, Margaret H.
Blackiston, James T.
Boote, Howard S.
Boylan, Edward M.
Brickley, Clarence E., Jr.
Brusowankin, Bessie
Bull, Carl E.
Burns, H. Spilman
Cantwell, Hammond D.
Carroll, James G.

Cesky, Frank A.
Clayman, Julius Y.
Cohen, Sidney
Conradi, Verta
Cox, John H.
Denaburg, Gertrude
Denaburg, Jerome
Dewling, Evelyn E.
Dickman, Milton J.
Dietz, Hyman
Donelson, Raymond
Downing, Rebecca D.
Dudderar, Charles W.
Dunwoody, Ruth
DuShane, Doris A.
Edgeworth, Clyde B.
Ekas, Alice A.
Ely, James H., Jr.
Freedman, Norman
Freehof, Jeanette
Freeland, Minerva
French, Ella M.
Galley, Joseph N.
German, John R.
Gillan, Andrew S.
Gipe, Ramon D.
Glatt, Bernard
Goldman, Lillie
Goldstein, Manuel Q.
Grafton, William N.
Grimes, John J.
Gross, Charles R.
Grove, Elmer K.
Griffith, Leonard
Haffner, Emanuel B.
Hamel, Ramont W.
Hardy, Earl C.
Harward, Lydia
Hawkins, Nannie
Hays, Howard R., Jr.
Hearn, Helen T.
Hensen, Henry L.
Hepting, Irene D.
Heylmun, Stanley
Hild, Charles D.
Hinson, Effie C.
Hisley, Lillian P.
Hocheder, Harry P.
Holden, Delma M.
Holecamp, Marion
Hollander, Anna
Hubbard, Arthur M.
Hucksoll, William J.
Jacobson, Anne
Jenkins, Adelaide
Jerabeck, Gertrude B.
Jirsa, Charles
Jolly, Julia

Jones, Julia E.
Kalb, Merrill
Karpa, Lillian
Keating, Lydia
Kidd, Frank
Kierson, Belle
Kinsey, Allan S., Jr.
Kirk, Harriet
Kornblatt, Joseph
Krausse, Harry
Krotee, Samuel
Kuehn, Peter
Levin, Sol
Ligon, Jennie D.
Longley, E. Leroy
Magness, Hattie E.
Mahannah, Erwin C.
Mainen, Allan
Marshall, Charles
Martin, Carrie P.
Marx, Ernest B.
Matthaei, Lewis A.
Mayo, Charles
Mele, Virginia
Merkle, Clifford
Messick, Carter D.
Meyer, Arthur A.
Meyers, George A.
Mitnick, Harry
Muller, Howard
MacBride, J. B.
McCaghey, Mildred C.
McCann, Harold R.
McCarriar, Herbert G.
McCollister, Mary G.
McDairmant, John
Neilson, Julia M.
Newlin, Hershel
Nides, Nicholas
O'Neill, James
O'Keeffe, Violet
Phillips, John L.
Powell, George C.
Proctor, James O.
Purnell, Andasia A.
Randall, Roland
Rankin, George
Reiter, Charles
Rich, Bessie A.
Richards, Ruth
Rock, Charles V.
Rohde, Clarence
Rosenberg, Albert J.
Rosenberg, Albert L.
Rubin, Hilda R.
Saltzman, Michael
Schmidt, Thekla D.
Scott, Charles E. P.

Sheridan, John
 Siegel, Esther F.
 Silbert, Celia
 Silbert, Keel
 Silverman, Frank
 Slade, Margaret
 Smith, Ferdinand
 Smith, Robert
 Spencer, Alma F.
 Spiegel, Anna
 Stevens, Mary A.
 Stone, John T.
 Thoms, Martha A.
 Townsend, Howard
 Vogel, George P.

Volland, Frederick
 Walker, Dunaway H.
 Waltham, Alan
 Watkins, Robert
 Webster, George L.
 Weisberg, Maurice M.
 Weller, Nannie
 Wiegman, Elgert
 Wilson, Ruth
 Winter, Ralph A.
 Wolfe, Charles
 Wondrack, Walter J.
 Yaffe, Paul
 Zieffe, Howard E.

COLORED

Addison, Edmund F.
 Ames, Cornelius
 Armstrong, Milton
 Berry, Ida L.
 Boston, Georgia M.
 Boston, Portia
 Britain, Edward E.
 Brown, J. Alexander
 Callis, Nellie M.
 Carter, James H.
 Cary, Charles
 Cephas, Charles
 Cothorn, John
 DeNeal, Ola L.
 Edmonds, Walter T.
 Echols, David
 Fisher, Gladys C.
 Fisher, Mabel
 Flanagan, LeRoy
 Ginn, Sylvester
 Grinage, Jeanette P.
 Grooms, David
 Harman, Martha
 Harris, Genevieve H.
 Hays, Ella G.
 Hill, John O.
 Hughes, Helen G.
 Jackson, Marione
 Jackson, Pearl
 Johnson, Carrie A.
 Johnson, Tazewell
 Jones, Reuben F.

Kyler, Margaret E.
 Lewis, James R.
 Long, Oscar
 Mero, Inez
 Montague, Pattie E.
 Moore, James E.
 Moore, Levi
 Nixon, William C.
 Peck, Edward J.
 Phillips, Hazel M.
 Pollard, Clara J.
 Rawlings, Cephas, Jr.
 Reavis, Newman B.
 Reavis, Bessie D.
 Reed, Milton B.
 Roberts, Lawrence
 Savage, Mary
 Stevenson, Eulalia
 Snowden, Louis
 Tilghman, John
 Travers, Helen
 Traynham, Hezekiah
 Turner, Walter T.
 Waters, Wilmore E., Jr.
 Watts, Reginald S.
 Williams, Arthur
 Williams, Edward A.
 Williams, Leon
 Wilson, Hallie H.
 Woods, Leo C.
 Wright, David N., Jr.
 Wynn, Vernice H.

COLLEGE OF ENGINEERING

SENIOR CLASS

Anderson, Carroll S., Baltimore
 Armentrout, John B., Bethesda
 Bartelmes, Raymond F., Washington, D. C.
 Beveridge, Andrew B., Berwyn

Bollman, Roger T., Baltimore
 Brooks, J. Gardner, Washington, D. C.
 Bruns, Bennard F., Baltimore
 Bryan, Harry V., Washington, D. C.

Castle, Noel O., Brookmont
 Christhif, John F., Baltimore
 Davis, Leon B., Chevy Chase
 Dayton, B. James, Bivalve
 Firmin, John M., Washington, D. C.
 Flagg, Louis F., Takoma Park
 Foley, Robert B., Washington, D. C.
 Frank, Selby M., Washington, D. C.
 Galliher, Joseph H., Jr., Washington, D. C.
 Gall, Ralph G., Thurmont
 Gibbs, Lewis T., Washington, D. C.
 Gilbert, George E., College Park
 Hall, Austin J., Washington, D. C.
 Hardie, Richard E., Washington, D. C.
 Harris, Joseph M., Washington, D. C.
 Hart, William A., Washington, D. C.
 Hensell, Robert L., Hagerstown
 Hilder, Peter F., Washington, D. C.
 Johnson, William T., Baltimore
 King, Paul L., Washington, D. C.
 Knoche, Henry G., Baltimore
 Leasure, William C., Silver Spring
 Lutz, Richard L., Riverdale
 Maynard, John F., Baltimore

McConnell, Andrew G., Havre de Grace
 McLean, John A., Jr., Washington, D. C.
 Menke, Fred H., Washington, D. C.
 Mossburg, Philip L., Jr., Baltimore
 Norris, Joseph V., Baltimore
 O'Neill, Bernard A., Annapolis
 Owens, James L., Federalsburg
 Park, Louis, Baltimore
 Parratt, Lyle F., Washington, D. C.
 Pates, William A., Chevy Chase
 Phillips, Jack W., Washington, D. C.
 Poole, Charles W., Frederick
 Reading, William M., Jr., Kensington
 Rimmer, James S., Hyattsville
 Robertson, Gordon W., Washington, D. C.
 Robinson, Howard O., Baltimore
 Root, Ellis P., Annapolis
 Ruppert, Edwin L., Silver Spring
 Shipley, James W., Harman
 Shoemaker, Francis D., Bethesda
 Steen, H. Melvin, Washington, D. C.
 Strobel, Henry C., Washington, D. C.
 Volland, Richard E., Washington, D. C.
 Zuk, Walter, New Britain, Conn.

JUNIOR CLASS

Bartoo, Donald G., Hyattsville
 Beckham, Robert W., Bethesda
 Belt, Kenneth G., Washington, D. C.
 Berger, Herman W., Jr., Baltimore
 Brotemarkle, Martin L., Cumberland
 Calder, Wright G., Baltimore
 Clark, Willson C., Takoma Park
 Constance, Harry S., Catonsville
 Dial, Herman P., Baltimore
 Donahue, William J., Washington, D. C.
 Eggers, Harold A., Washington, D. C.
 Felton, Charles W., Washington, D. C.
 Firmin, Philip, Washington, D. C.
 Furtney, Charles S., Cumberland
 Gibbs, Edward H. D., Hyattsville
 Groverman, Arthur B., Washington, D. C.
 Harryman, Thomas D., Baltimore
 Haspert, Mathews J., Chester
 Heiss, John W., Washington, D. C.
 Horman, Austin S., Baltimore
 Horne, John F., Chevy Chase
 Hudgins, Houlder, Washington, D. C.
 Hueper, Louis R., Berwyn
 Hynson, B. Thomas, Washington, D. C.
 Jackson, Robert A., Rockville
 Janes, Charles F., Oxon Hill
 Kelly, Harold L., Jr., Forest Glen
 Lodge, Fred R., Washington, D. C.
 Lopata, Alexander A., Baltimore

Ludlow, Francis W., Washington, D. C.
 Mann, Arthur W., Washington, D. C.
 Marans, Allen, Washington, D. C.
 McCool, William A., Hagerstown
 McCurdy, Philip C., Kensington
 McDonald, Thomas S., Perryman
 McLaughlin, Thomas O., Woodbridge, N. J.
 McLeod, Robert J., Edmonston
 Morgan, Lee, Washington, D. C.
 Mueller, Eugene F., Washington, D. C.
 Ogle, Emerson, Catonsville
 Orcutt, Charles B., Washington, D. C.
 Patterson, Norman P., Baltimore
 Phillips, Clarence W., Princess Anne
 Platt, Doran S., Jr., Takoma Park, D. C.
 Reichard, Donald S., Washington, D. C.
 Rose, Glen W., Washington, D. C.
 Roylance, Merriwether L., Branchville
 Savage, Alfred E., Washington, D. C.
 Shinn, John S., Washington, D. C.
 Shupp, Erwin H., Washington, D. C.
 Siems, John L., Jr., Baltimore
 Smith, Warner T., College Park
 Staples, Samuel J., Lanham
 Tibbets, William L., Chevy Chase
 Wedding, Presley A., Washington, D. C.
 Willett, LeRoy G., Washington, D. C.
 Willis, Alvin H., Washington, D. C.

SOPHOMORE CLASS

Andrews, John T., Jr., Baltimore
 Babcock, William H., Washington, D. C.
 Backhaus, Albert P., Baltimore
 Baldwin, Franklin H., Chevy Chase, D. C.
 Bennett, Joseph H., Washington, D. C.
 Bishoff, Frederick M., Washington, D. C.
 Bishop, John C., Queenstown
 Bowman, George A., Annapolis Junction
 Brockman, Carl L., Baltimore
 Brode, Carl K., Frostburg
 Brookhart, George C., Jarrettsville
 Browning, John R., Washington, D. C.
 Cannon, Leon F., Washington, D. C.
 Chappellear, James A., Jr., Washington, D. C.
 Chilcoat, Ralph L., Washington, D. C.
 Cladny, Harold, Washington, D. C.
 Collins, James E., Crisfield
 Collins, Ralph A., Jr., Washington, D. C.
 Collison, Malcolm N., Takoma Park
 Connery, Edward F., Washington, D. C.
 Corbin, Maurice F., Woodbine
 DeArmey, Frank T., Windber, Pa.
 Diggs, Robert S., Baltimore
 Fenton, William R., Berwyn
 Finch, Alvah H., Baltimore
 Funk, William R., Jr., Baltimore
 Gebhardt, Charles M., Silver Spring
 Gerber, Sigmund I., Baltimore
 Goldbeck, Page, Chevy Chase
 Goldberg, Paul, Baltimore
 Gray, Vernon H., Chevy Chase
 Harris, Fred, Washington, D. C.
 Hines, Stedman W., Scarsdale, N. Y.
 Hollister, Curtis L., Washington, D. C.
 Hood, Robert K., Washington, D. C.
 Hutton, Joel W., College Park
 Jordan, Ralph S., Washington, D. C.
 Kelly, Thomas J., Bergenfield, N. J.
 Kennedy, Edward J., Baltimore
 Kluckhuhn, Frederick H., Laurel
 Korab, Arnold A., Washington, D. C.
 Latterner, Henry, Chevy Chase
 Loweth, Donald C., Washington, D. C.
 Luttrell, John C., Washington, D. C.
 Lynham, John C., Hyattsville
 Main, Irwin I., Jr., Seat Pleasant
 Malakoff, Norman, Washington, D. C.
 Mattingly, Robert L., Washington, D. C.
 Maynard, William G., Baltimore
 McClenon, Donald, Takoma Park
 McCleskey, Benjamin C., Washington, D. C.
 McKnew, Benjamin P., Laurel
 Meinzer, Roy C., Washington, D. C.
 Mims, James R., Jr., College Park
 Muncks, John D., Baltimore
 O'Connell, Daniel T., Washington, D. C.
 Odell, Robert C., Ellicott City
 Owens, Herbert M., Federalsburg
 Parce, John R., Annapolis
 Pariseau, Roger G., Bethesda
 Parsons, Charles R., Washington, D. C.
 Peck, Alvin B., Washington, D. C.
 Phillips, Adon W., Bethesda
 Pierce, Charles H., Jr., Washington, D. C.
 Porter, Wade T., Jr., Washington, D. C.
 Putman, Raymond S., Washington, D. C.
 Raymond, Gilbert J., Fort George G. Meade
 Reed, I. Lee, Laurel
 Ropes, John C., Chevy Chase
 Roundy, Paul C., Chevy Chase
 Ryan, William H., Washington, D. C.
 Schreiber, Irvin R., Washington, D. C.
 Schwartz, Charles H., Branchville
 Shaffer, Thomas N., Washington, D. C.
 Shearer, Ross W., University Park
 Smith, John P., Jr., Washington, D. C.
 Smith, Welch, Washington, D. C.
 Sperry, Harold C., Baltimore
 Steward, John A., Ellicott City
 Teabo, Marshall W., Baltimore
 Turnbull, James, Takoma Park
 Vernay, Howard A., Jr., Baltimore
 Walton, Robert L., Chevy Chase, D. C.
 Wettje, Robert H., Riverdale
 Wilson, J. Gibson, Washington, D. C.
 Wolk, Reuben, Washington, D. C.
 Yourtee, Leon R., Jr., Brownsville

FRESHMAN CLASS

Adams, Clifton L., Jr., Silver Spring
 Ashmun, Van S., Washington, D. C.
 Bamman, Richard K., Palmers
 Batch, Donald T., Hyattsville
 Bebb, Edward K., Chevy Chase
 Berg, Charles M., Baltimore
 Boarman, James L., Brentwood
 Bowman, William S., Aberdeen
 Boyd, Robert H., Washington, D. C.
 Brashears, Richard S., Washington, D. C.
 Breaden, Richard C., Berwyn
 Brookes, Thomas R., Jr., Bel Air
 Brown, Elton H., Mt. Rainier
 Brown, Lee L., Washington, D. C.
 Budkoff, Nicholas, Lynn, Mass.
 Carpenter, Bryon L., Washington, D. C.

Clark, Howard W., College Park
 Cohen, Manuel, Baltimore
 Cook, Robert P., Washington, D. C.
 Daly, C. Robert, Baltimore
 Daneker, Million, Bel Air
 Davis, Preston L., Jr., Washington, D. C.
 Davis, Robert L., Cumberland
 Davis, William B., Washington, D. C.
 Day, George S., Alexandria, Va.
 DeArmey, John J., Windber, Pa.
 Deeley, Haskin U., Jr., Baltimore
 Dix, Francis X., Washington, D. C.
 Dorr, George W., Washington, D. C.
 Duvall, William D., Washington, D. C.
 Eaton, Ralph A., Washington, D. C.
 Elvove, Elies, Washington, D. C.
 Essex, H. Alfred, Washington, D. C.
 Etkind, Irving J., New Haven, Conn.
 Farrall, John A., Washington, D. C.
 Fleming, Harold E., Savage
 Forrester, James L., Berwyn
 Franke, Harold H., Washington, D. C.
 Gessford, Richard L., Mt. Rainier
 Gottlieb, Robert, Washington, D. C.
 Greenwood, Orville W., Brentwood
 Hall, Herbert P., Washington, D. C.
 Harris, George M., Bladensburg
 Hart, Robert L., Hagerstown
 Harvey, Cecil L., Washington, D. C.
 Hawley, Walter O., Takoma Park
 Held, Robert L., Baltimore
 Hewitt, Frederic M., Chevy Chase
 Hill, Harold C., Baltimore
 Hutchison, James D., Washington, D. C.
 Janes, Henry W., Anacostia, D. C.
 Johnson, Clifford E., Washington, D. C.
 Jones, Stephen H., Leonardtown
 Kern, Richard E., Braddock Heights
 Kestler, Paul G., Baltimore
 Kinney, Robert W., Washington, D. C.
 King, Thomas O., Savage
 Krafft, Robert E., Washington, D. C.
 Krautler, Charles M., Washington, D. C.
 Kreuzburg, Harvey W., Silver Spring
 Ladson, Francis H., Rockville
 Lasswell, Philip M., Takoma Park
 Leaf, Albert L., Williamsport
 Leusenkamp, Harry A., Washington, D. C.
 Lynt, Richard K., Jr., Washington, D. C.
 Manown, George F., Baltimore
 Mause, John D., Myersville
 McGill, Lloyd H. R., Thurmont
 Mears, Frank D., Pocomoke City
 Mitchell, David H., Washington, D. C.
 Molesworth, Carlton, Jr., Frederick
 Moore, William F., Bethesda
 Moran, Joseph T., Westernport
 Morris, Francis C., Washington, D. C.
 Mulitz, Milton M., Washington, D. C.
 Murray, Harold F., Bethesda
 Myers, George H., Hyattsville
 Nicholls, Robert D., Boyds
 Perkins, Fred W., Jr., Chevy Chase
 Perros, Agamemnon P., Washington, D. C.
 Phillips, Irving, Washington, D. C.
 Poole, Lewis A., Annapolis
 Pugatch, Melvin T., Baltimore
 Reese, Carrollton E., Washington, D. C.
 Roberts, E. Richard, Washington, D. C.
 Robertson, Elliott B., Bethesda
 Russell, Joseph S., Maddox
 Schafer, George G., Brooklyn
 Scott, Elgin W., Jr., Washington, D. C.
 Scully, Walter D., Washington, D. C.
 Seeley, George E., Baltimore
 Sherwood, James L., Washington, D. C.
 Simms, Harvey C., Washington, D. C.
 Smith, John T., Rockville
 Smith, Ralph N., Washington, D. C.
 Stedman, Henry T., Baltimore
 Steiner, Warren E., Washington, D. C.
 Stevens, John W., Takoma Park
 Strausbaugh, Donn P., Chevy Chase
 Talbott, Horace J., Bennings, D. C.
 Talone, Edward R., Brentwood
 Tate, Roy A., Mt. Rainier
 Thompson, Thomas M., Washington, D. C.
 Tillotson, George B., Jr., Washington, D. C.
 Walsh, Ambrose J., Jr., Brentwood
 Warfield, Gustavus A., College Park
 Warren, Paul W., Washington, D. C.
 West, Vernon E., Jr., Chevy Chase
 Wharton, Thomas P., College Park
 Wheeler, Francis W., Silver Spring
 Witt, Emmitt C., Washington, D. C.
 Wolf, Charles C., Hagerstown

UNCLASSIFIED AND PART TIME

Guerra, Joseph C., Roma, Texas
 Holbrook, Charles C., College Park
 Hutton, Junius O., Chevy Chase

EXTENSION CLASSES IN MINING

BARRELVILLE

Bennett, John
Blank, Samuel
Bridges, Cecil
Carter, Edward J.
Chambers, Gerald
Crowe, Edward C.

Diehl, Irvin A.
Graham, Colin
Loar, Harry
Porter, James
Ringler, James
Winner, Charles F.

BARTON

Arnold, Dominic L.
Ashby, R. M.
Beeman, Walter
Bosley, Charles W.
Bosley, Paul
Custer, Thomas
Dye, Cecil
Frenzel, Albert
Hoffa, A. P.
Houdersheldt, Robert

Hyde, Chester
Jones, Thomas J.
Metz, Samuel A.
Miller, E. L.
Roberts, John
Tichnell, Olyn
Tranum, Thomas
Wilson, Jacob V.
Wilt, Guy E.

CRELLIN

Adams, Howard
Alexander, Luther
Ashby, Dorsey
Ashby, Lee
Ashby, Stanley
Bowser, Lawrence
Cannon, Harold
Dawson, Paul
DeWitt, Adrian
DeWitt, Otis
DeWitt, T. A.
DeWitt, William
Durst, Wendell
Ellis, Dale
Fahrety, Edward
Fahrety, William
Forman, John H.
Friend, Arthur

Gilmore, Junior
Hahn, Carroll
Henline, Robert
Henline, T. C.
Hinebaugh, George
Jordan, Kenneth
Lewis, Archie
Lewis, Burruss
Murphy, William H.
Uphole, Raymond
Reckart, Carlos
Roy, Arthur
Roy, E. R.
Savage, William
Shaffer, Nordeck
Skipper, Wilbur
Smith, Hubert

FROSTBURG

Anderson, Roy
Bretz, Frederick L.
Brode, Solomon H.
Condon, Thomas
Edwards, R. L.
Edwards, Jack
Geis, Charles E.
Glime, Charles H.
Hendley, John
Keister, Harry
Keister, John

Keister, Russell
Loar, Stanley M.
Montana, Joseph
Powell, Thomas B.
Powers, Frank T.
Richards, Arnold
Rephan, William H.
Smouse, John L.
Stroup, Richard
Sweitzer, Ben K.
Weimer, Stanley

GORMAN

Butts, Roy
Cosner, Sidney
Evans, Maynard
Foley, Lester
Gilbert, Robert
Hughes, John T.
King, Ronald
Miller, Claude
Miller, Riley
Miller, W. H.
Pase, John R.

Reall, Harry
Reall, John
Reall, Peter
Reall, Walter
Reall, William
Ridings, J. A.
Schell, Harold
Schell, Herman
Sisler, Leo
Williams, G. L.
Williams, Jack

GRANTSVILLE

Alexander, Guy F.
Beachy, Elmer
Beachy, Lee
Beachy, Vernon
Butler, Robert
Durst, William
Folk, Glen
Glottfelty, H. M.
Glottfelty, Ralph
Landis, M. L.
Miller, Glen
Miller, J. C.

Patton, Henry
Schaefer, Charles
Schaefer, J. A.
Schaefer, Mark
Schaefer, M. W.
Swauger, Ivan
Walls, John
Walls, Bernard
Yoder, A. J.
Yommer, L. D.
Younkin, Walter

JENNINGS

Alexander, Guy F.
Billmeyer, Elmer
Bittinger, Harry
Durst, Garland
Durst, Harry
Hare, Clarence
Henaghan, John J.
Hoover, Russell
Ohler, John
Platter, Edward
Ross, Clark

Ryman, Herman
Stein, Fred
Stein, Roy
Warnick, Homer
Warnick, Marvin
Weise, Robert A.
Wilburn, Perry
Wilburn, Walter
Wilt, Harry
Yommer, L. D.
Yommer, Oney

KEMPTON

Buckley, Harry
Cosner, D. E.
Fink, Creede
Hoopengardner, George
Jackson, Robert
Jennings, Arnold

King, Arthur
Kovach, Andrew
Luzier, Carl
Ryan, Richard
Tasker, Albert
Tasker, Cassel

KITZMILLER

Burrell, Edward
Burrell, Fitzhugh
Burrell, Wilbur
Coleman, John
Iman, Gerald
Long, Frank

Pritts, Fredlock
Shore, John A.
Tasker, O. W.
Walker, Clark
Walker, J. J.
Weicht, Ronald

LONACONING

Alexander, James H.
 Bittinger, Fred
 Brooks, James D.
 Goebel, Joseph
 Langley, William
 Loar, George
 Loar, John

Martin, Matthews, Sr.
 Martin, William H.
 Sigler, Charles A.
 Snyder, David
 Steele, Harry
 Steele, John J.
 Sulser, Harry

SHALLMAR

Bohn, Steve
 Brady, Elzie
 Brady, John
 Brady, Oscar
 Carp, Tony
 Conley, Carl
 Crouse, Frank
 Crouse, John
 Cummings, George
 Cutchall, W. H.
 Fazenbacker, Eugene
 Feathers, Orville
 Gough, Carl
 Harvey, Willis
 Helmick, Blaine
 Hipp, Howard
 Hobbs, W. G.
 Kinney, S. R.
 Lantz, J. T.
 Lickliter, Don
 Lyons, George
 Lyons, Howard
 Lyons, Melvin
 Martin, Charles

Moon, Milton
 Murray, W. J.
 McIntyre, Albert
 McIntyre, Claude
 Nelson, Raymond
 Phillips, Clarence
 Phillips, Ross
 Prando, Jesse
 Prando, Scott
 Prando, Wolford
 Rohm, James
 Shaffer, Albert
 Shaffer, Ward
 Sharpless, R. A.
 Spiker, E. C.
 Spiker, Edward
 Swansboro, Thomas
 Tasker, Samuel
 Turner, Edward
 Warnick, Anthony
 Warnick, Russell
 Warnick, W. M.
 Wright, Harry

VINDEX

Beeman, Fred
 Butler, A. C.
 Butler, Orville
 Clark, James
 Cline, Lawrence
 Comp, Elwood
 Dahlgren, Arthur
 Dahlgren, Roy
 Damon, Frank
 Davis, Robert
 Dixon, Oliver
 Dixon, Raymond
 Edwards, Harry
 Edwards, James
 Ellenberger, Edgar
 Ellifritz, C. F.
 Ellifritz, Ellis

Ellifritz, Ralph
 Friend, George
 Keefer, William
 Kitzmiller, Orange
 Knox, Lawrence
 Lanham, Lee
 McRobie, Albert
 Michaels, John
 Muffley, R. E.
 Nelson, James
 Simms, James
 Simms, Monzel
 Stewart, A. G.
 Stewart, J. F.
 Stewart, Marshall
 Stewart, William
 Sweitzer, Robert

GRADUATE SCHOOL

Adams, Albert C., Bristol, Tenn.
 Adams, John R., Jr., Takoma Park
 Alderton, Harold L., College Park
 Allen, Rolfe L., Washington, D. C.
 Anderson, Earl J., College Park
 Baldwin, Willis H., Havre de Grace
 Ball, Cecil R., Ditchley, Va.
 Ballou, Evelyn F., Washington, D. C.
 Bartlett, John B., Baltimore
 Bartram, M. Thomas, Berwyn
 Beck, Frances F., Baltimore
 Behrens, Arthur H., Washington, D. C.
 Bell, William E., Cochran, Pa.
 Billings, Samuel C., Silver Spring
 Blew, Genevieve S., Washington, D. C.
 Blitch, Lila M., Statesboro, Ga.
 Blue, Elmer C., Takoma Park
 Boyles, William A., College Park
 Brewer, Charles M., Hyattsville
 Brooks, Paul S., Buckhannon, W. Va.
 Bruening, Charles F., Baltimore
 Bryson, Beth, Baltimore
 Burch, Dorothy F., Washington, D. C.
 Burton, John O., Washington, D. C.
 Caltrider, Samuel P., Westminster
 Campbell, William D., Hagerstown
 Carhart, Homer, Santiago, Chile
 Carr, C. Jelleff, Baltimore
 Chase, Spencer P., Riverdale
 Citrin, Estelle, Brooklyn, N. Y.
 Cox, B. F., Berwyn
 Crossman, Mora, Brooklandville
 Cwalina, Gustav E., Baltimore
 D'Ambrogi, Giulio D., Baltimore
 Dean, Reginald S., Washington, D. C.
 DeDominicis, Amelia C., Baltimore
 Douglass, E. M., Silver Spring
 Dozois, K. Pierre, Baltimore
 DuBose, Clyde H., Pocomoke City
 Dunker, Melvin F. W., Baltimore
 Dunnigan, A. P., Pylesville
 Duvall, Harry M., Cheverly
 Elliott, Crystal, Oakland
 Elvove, Joseph T., Washington, D. C.
 Engel, Lea K., Washington, D. C.
 Essex, Alma, Washington, D. C.
 Evangelist, Alaric A., Jenkintown, Pa.
 Evans, William E., Jr., Baltimore
 Everett, Edward, Washington, D. C.
 Everhart, Herbert W., Kearneysville, W. Va.
 Faber, J. E., College Heights
 Fisher, Ralph C., Hyattsville
 Flint, Einar P., Washington, D. C.
 Flanders, Robert H., Washington, D. C.
 Funk, Clifford E., Boonsboro

Goodner, Henrietta, Cherrydale, Va.
 Green, Catherine R., College Park
 Grove, Donald C., Baltimore
 Hack, Alfred C., Overlea
 Haenni, Edward O., Takoma Park
 Haller, H. S., Baltimore
 Hamilton, Jean G., Hyattsville
 Hammond, Elmer G., Baltimore
 Harns, Henry G., Washington, D. C.
 Harris, Hillman C., Washington, D. C.
 Hart, William J., Mt. Rainier
 Haskins, Willard T., Binghamton, N. Y.
 Haszard, Frank K., Hyattsville
 Haviland, Elizabeth E., Brookeville
 Heironimus, Clark W., Washington, D. C.
 Heller, Hugh A., Atlantic City, N. J.
 Hersberger, Arthur B., Barnesville
 Hesse, Claron O., Los Angeles, Calif.
 Hookom, Don W., College Park
 Horne, William A., Chevy Chase
 Houston, David F., Washington, D. C.
 Howard, Frank L., Hyattsville
 Hunt, Ruth A., Hyattsville
 Hunt, William H., Baltimore
 Ichniowski, Casimir T., Baltimore
 Ingersoll, H. Gilbert, Chestertown
 Jack, Jane W., Rowlandville
 Jacobs, Marion L., Chapel Hill, N. C.
 Jahns, Frederick W., Jr., Baltimore
 Jansen, Eugene F., Washington, D. C.
 Jarrell, Temple R., Hyattsville
 Jeffers, Walter F., Berwyn
 Jehle, Ruth A., Hyattsville
 Jessup, Daniel A., Washington, D. C.
 Johnson, Mary W., Burlington, N. C.
 Kalousek, G. L., Washington, D. C.
 Kalavski, Paul, Baltimore
 Kanagy, Joseph R., Washington, D. C.
 Kemp, Robert T., Casper, Wyo.
 Lachar, George P., Detroit, Mich.
 Lakin, Hubert W., Silver Spring
 Lanham, William B., College Park
 Lankford, Mary L., Elkridge
 Lawall, Willard M., Washington, D. C.
 Lear, Samuel A., Philadelphia, Pa.
 Lehr, H. Franklin, Bethesda
 Lennartson, R. W., Washington, D. C.
 Lenoci, Ralph J., Bridgeport, Conn.
 Littleford, Robert A., Washington, D. C.
 Lofgren, Olga C., Colmar Manor
 Lowe, Charles S., College Park
 Lutz, Harry, Sodus, Mich.
 Lutz, Jacob M., Washington, D. C.
 MacCreary, Donald, Newcastle, Del.
 Madigan, George F., Washington, D. C.
 Mandel, Jacob, Jersey City, N. J.

Mandrow, Mary A., White Marsh
 Marth, Paul C., College Park
 McCann, Lewis P., Dayton, O.
 McGowan, George E., Baltimore
 McVey, Warren C., Landover
 Middleton, F. A., Washington, D. C.
 Miller, Fred L., Mt. Rainier
 Miller, Howard A., Rochester, N. Y.
 Miller, Roman R., Washington, D. C.
 Millett, Sylvia, Pen-Mar, Pa.
 Morgan, Claudine M., Lonaconing
 Morris, Leona S., Baltimore
 Munsey, Virdell E., Washington, D. C.
 Myers, Gibbs, Washington, D. C.
 Myers, Alfred T., Riverdale
 Nash, Carroll B., College Park
 Nelson, Eleanor R., Washington, D. C.
 Nusinow, S., Baltimore
 Ostrolenk, Morris, Washington, D. C.
 Painter, Elizabeth, New Freedom, Pa.
 Parent, Paul A., Washington, D. C.
 Pigman, William W., Oak Park, Ill.
 Poffenberger, Paul R., Hagerstown
 Powell, Burwell B., Riverdale
 Purdum, William A., Baltimore
 Quinn, Edward F., Jr., Washington, D. C.
 Reynard, George B., Hiram, O.
 Rhodes, Harry C., Poolesville
 Rice, Robb V., Missoula, Mont.
 Richardson, Howard E., Perth Amboy, N. J.
 Riedel, Erna M., Gambrills
 Riley, Virginia L., Snow Hill
 Roberts, Bertran S., Westernport
 Rose, Frank W., Jr., Washington, D. C.
 Rosen, Harry, Washington, D. C.
 Sadowsky, Irving, North East
 Schneider, Roy, Silver Spring
 Schutt, Cecil, Takoma Park
 Seltzer, Sarah L., Washington, D. C.
 Shaw, Ann B., College Park
 Shirk, Harold G., West Lawn, Pa.
 Singer, Louis, Washington, D. C.
 Sixbey, George L., Mayville, N. Y.
 Slade, Hutton D., Baltimore

COLLEGE OF HOME ECONOMICS

SENIOR CLASS

Aitcheson, Catherine E., Laurel
 Benedict, Frances, Silver Spring
 Bowker, Lucile, Washington, D. C.
 Carlton, Mildred E., Bethesda
 Cornell, Barbara E., Silver Spring
 Cross, Mary E., Queenstown
 Fouts, N. Rebekah, Washington, D. C.
 Goss, Betty J., Chevy Chase

Sloan, Joseph W., Bayonne, N. J.
 Slocum, Glenn G., Washington, D. C.
 Smith, DeWitt, Takoma Park
 Soper, Agnes P., Washington, D. C.
 Speicher, John P., Accident
 Stansby, Maurice E., St. Paul, Minn.
 Steinbauer, Clarence E., Laurel
 Stier, Howard L., Glenelg
 Stimpson, Edwin G., College Heights
 Stinnett, Lucille L., Brentwood
 Stirton, Alexander J., Washington, D. C.
 Strauss, Ruth, Washington, D. C.
 Stuart, Leander S., Washington, D. C.
 Sugrue, Berned A., Chevy Chase
 Taylor, John K., Mt. Rainier
 Teitelbaum, Harry A., Brooklyn, N. Y.
 Thompson, James U., Cambridge
 Thompson, Ross C., Chevy Chase
 Tillson, Albert H., Clarendon, Va.
 Turner, Carla S., Takoma Park
 Tymeson, Sidney W., Takoma Park
 Ullrich, James R., Baltimore
 Volckhausen, Walter R., New York, N. Y.
 Walker, Earnest A., Mount Airy
 Walker, William P., Berwyn
 Wallace, David H., Barclay
 Watkins, Grace O., Hyattsville
 Weitzell, Everett C., Accident
 Welsh, Llewellyn H., Washington, D. C.
 Wester, Robert E., Washington, D. C.
 Weyman, L. Arthur, Washington, D. C.
 Whiteman, Thomas M., Washington, D. C.
 Wilkinson, Mabel B., Washington, D. C.
 Williams, Charles W., Ashland, Ky.
 Williams, Ralph C., Silver Spring
 Wilson, C. Merrick, Poolesville
 Wilson, Vivian K., Washington, D. C.
 Wingate, Phillip J., Wingate
 Woods, Mark W., Berwyn
 Yonkers, Genevieve A., Flintstone
 Zapponi, Paschal P., Wooster, O.
 Zervitz, Max M., Baltimore
 Zimmermann, Verna M., Baltimore

JUNIOR CLASS

Benton, Betty L., Glen Echo
 Booth, Emma L., Brunswick
 Craig, Katherine N., Hyattsville
 Ellis, Bernice A., Washington, D. C.
 Franklin, Sarah E., Hyattsville
 Garner, Mary F., Washington, D. C.
 Giles, Martha L., Washington, D. C.
 Goll, Katharine E., Washington, D. C.
 Gorsuch, M. Jeannette R., New Windsor
 Hardy, Katharine R., Hyattsville
 Hazard, Edith W., Takoma Park
 Hughes, Elizabeth, Chevy Chase
 Leishear, Virginia E., Washington, D. C.
 Mattoon, Catherine V., Takoma Park

Millar, Dorothy V., Washington, D. C.
 Miller, Mary F., Silver Spring
 Price, Margaret A., Ridgewood, N. J.
 Schmidt, Valette A., Washington, D. C.
 Snyder, Ruth I., College Park
 Solliday, Alice J., Blue Ridge Summit, Pa.
 Somers, Helen, Hyattsville
 Starr, Margaret E., Hyattsville
 Stearns, Lois E., Mt. Rainier
 Stolzenbach, Helen A., Baltimore
 Waldman, Flora E., Washington, D. C.
 Weaver, Ella K., Ellicott City
 Weidemann, Janet S., Washington, D. C.
 Wulf, Vivian E., Washington, D. C.

SOPHOMORE CLASS

Allen, Josephine R., Takoma Park
 Baines, Anna M., Lanham
 Beall, Virginia L., Bethesda
 Beggs, Mary A., Baltimore
 Broughton, Elinor C., College Park
 Burrier, Letitia S., Baltimore
 Caldwell, Katherine, Chevy Chase
 Cammack, Ella V., Washington, D. C.
 Cochran, Olive A., Mercer, Pa.
 Cruikshank, Eleanor M. A., Baltimore
 Dahn, N. Eloise, Chevy Chase
 Davis, Katherine I., Washington, D. C.
 Dulin, Jean M. A., Chevy Chase
 Fisher, Ida A., Takoma Park
 Galloway, Rhea M., Lonaconing
 Gould, Irene S., Takoma Park
 Hearn, Mildred L., Washington, D. C.
 Hershberger, Anna L., Luray, Va.
 Hutchinson, M. Carol, Takoma Park
 Jeffers, Betty C., Washington, D. C.
 Jefferson, E. Marguerite, Salisbury

Johnson, Edna E., Brentwood
 Jones, Audrey S., Washington, D. C.
 Kaylor, Helen L., Hagerstown
 Knight, Ruth E., Washington, D. C.
 Krauss, Mary G., Baltimore
 Kuhn, Lois M., Bethesda
 Lyons, Betty L., Baltimore
 Meaker, Doris E., Washington, D. C.
 Mills, Josephine H., Cumberland
 Patch, Barbara J., Hyattsville
 Quirk, Eleanor K., Washington, D. C.
 Reville, Ruth C., Baltimore
 Rosen, Janet A., Fort Salonga, L. I., N. Y.
 Rosin, Anne, Silver Spring
 Shearer, Kathleen M., Baltimore
 Smeltzer, Mary B., Silver Spring
 Snyder, Paula W., Washington, D. C.
 Walker, Vera H., Ellicott City
 Weber, Ruth P., Cumberland
 Wellington, Esther R., Takoma Park

FRESHMAN CLASS

Abbott, Kathryn F., District Heights
 Adkins, Kathryn, Salisbury
 Bain, Betty B., Washington, D. C.
 Balderston, Helen G., Colora
 Barker, Marian E., Washington, D. C.
 Beals, Jane H., Washington, D. C.
 Bloom, Betty R., Cleveland Heights, O.
 Bosley, Audrey M., Baltimore
 Byrd, Evelyn W., College Park
 Cain, Harriet G., Felton, Del.
 Davis, Barbara J., Chevy Chase
 DeAlba, Doris E., Glen Burnie—Unc.
 Dotterer, Jacklyn S., Chevy Chase
 Duncan, Eunice C., Washington, D. C.
 Dunnington, Doris M., Chevy Chase
 English, Alice L., Union, N. J.

George, Mary E., Mt. Rainier
 Hartig, Jean M., Washington, D. C.
 Hill, Millie L., Silver Spring
 Huff, Dorothy A., Chevy Chase
 Hurley, Grace M., Berwyn
 Johnson, Virginia M., Baltimore—Unc.
 Kephart, Jane F., Takoma Park
 Kolan, Rosalind L., Baltimore
 Law, Betty H., Washington, D. C.
 Lind, Thelma V., Washington, D. C.
 MacDonald, Margaret E., Bethesda
 McCann, Virginia E., Annapolis
 McGinniss, Bell W., Kensington
 McGinnis, Verneena, Pomonkey
 Miller, Alma V., Baltimore
 Myers, Edith W., Washington, D. C.

Nash, Alice M. Berwyn
 Nash, Constance M., Chevy Chase
 Neumann, Eileen C., Freeport, N. Y.
 Peruzzi, Dolores M., Washington, D. C.
 Platt, Helen B., Takoma Park, D. C.
 Pollard, Kitty L., Baltimore
 Pope, Beverly M., Hagerstown
 Samson, Catherine M., Takoma Park
 Schindel, Jeannette S., Takoma Park
 Sherman, Eleanor, Baltimore
 Skinner, Doris E., Port Republic

Smith, Virginia E., Mt. Airy
 Soper, Ruby E., Washington, D. C.
 Speake, Mary M., Luray, Va.
 Spehnkouch, Lucia A., Baltimore
 Stevenson, Marguerite S., Takoma Park
 Stewart, Dorothy M., Gambrills
 Thawley, H. Eloise, Denton
 Tuttle, Ella M., Baltimore
 Waldman, Fredricka I., Washington, D. C.
 Wilson, Ethel J., Rock Hall

UNCLASSIFIED AND PART TIME

Grandstaff, Helen B., Brentwood

Patterson, Dorothy H., Weaverville, N. C.

SCHOOL OF LAW

FOURTH YEAR EVENING CLASS

Blake, William French, Baltimore
 Cohen, Elbert H., Baltimore
 Engeman, George Hyde, Baltimore
 Gardiner, Norman Bentley, Jr., Riderwood
 Hurlock, C. Harlan, Jr., Baltimore
 Lurz, Thomas Albert, Baltimore
 Macaluso, Samuel James, Annapolis
 Manekin, Bernard, Baltimore
 Miller, Irvin, Baltimore

Moran, Francis Robert, Baltimore
 Moran, John Joseph, Jr., Baltimore
 Patrick, John Francis DeValangin, Baltimore
 Rothschild, Randolph Schamberg, Baltimore
 Tippet, J. Royall, Jr., Baltimore
 Waidner, Robert Allen, Baltimore
 Watchorn, Carl William, Baltimore
 Wood, Howard Graham, Baltimore

THIRD YEAR DAY CLASS

Boylston, Edward Shoemaker, Columbia, S. C.
 Brinsfield, Calvin Linwood, Rhodesdale
 Chesnut, Elizabeth Maxwell Carroll, Baltimore
 Clark, Ernest Collins, Salisbury
 Constable, Albert, Elkton
 Depro, Frank Smith, Baltimore
 Dickey, John Maxwell, Deale
 Digges, John Dudley, La Plata
 Doub, Elizabeth Boys, Cumberland
 Hamburger, Herbert David, Baltimore
 Horchler, Edwin Maxwell, Cumberland
 Kaiser, Joseph, Baltimore
 Karper, Sharpe D., Hagerstown
 Lung, Clarence Wesley, Smithsburg
 McCabe, James Gordon, Towson
 McGrath, James Joseph, Jr., Baltimore
 Miller, Sydney Boroh, Baltimore

Naughton, Harold Edward, Cumberland
 Pergler, Carl, Washington, D. C.
 Rafferty, William Bernard, Baltimore
 Renneburg, John Norris, Baltimore
 Renninger, Julius Christian, Jr., Oakland
 Roney, James Albert, Jr., North East
 Russell, Joseph Crandell, Annapolis
 Schwaab, H. Donald, Baltimore
 Singley, Frederick J., Jr., Baltimore
 Smith, Everett Irving, Oradell, N. J.
 Stansbury, William Benton, Jr., Baltimore
 Stirling, Campbell Lloyd, Baltimore
 Sullivan, Daniel Stephen, Jr., Baltimore
 Tarantino, Henry Joseph, Annapolis
 Tubman, Vincent Alexander, Westminster
 Verlin, Bernard Monaham, Baltimore
 Whitworth, Horace Pritchard, Jr., Westernport
 Young, Thomas Gorsuch, Jr., Baltimore

THIRD YEAR EVENING CLASS

Applefeld, Irving J., Baltimore
 Athey, Charles Edwards, Severna Park
 Becker, James Stephen, Baltimore
 Bender, William Francis, Baltimore
 Bloom, Joseph Gerald, Baltimore

Bonn, Douglas Keith, Baltimore
 Buck, Hugh Quinn, Baltimore
 Carr, Eberle William, Baltimore
 Clarke, DeWitt Forman, Baltimore
 Cohen, Bernard Solomon, Baltimore

Coolahan, Joseph Paul, Baltimore
 Dixon, Earl Martin, Baltimore
 Gamse, Leroy Levald, Baltimore
 Graves, Clifford Holmes, Baltimore
 Houff, Thomas M., Baltimore
 Jacobson, Alfred Theodore, Baltimore
 Kaplan, Maurice A., Baltimore
 Keech, Frank Bartholomew, Baltimore
 Linthicum, Sweetser, Linthicum Heights
 Mattingly, Edward Wiegand, Baltimore

Mraz, Anton Joseph, Perth Amboy, N. J.
 Picario, Philip John, Baltimore
 Power, Gordon Gilbert, Baltimore
 Power, John Carroll, Baltimore
 Reynolds, Lee Bishop, Baltimore
 Rouse, James Wilson, Easton
 Stissel, Carl Frederick, Baltimore
 Tucker, William Randolph, Baltimore
 Walker, D. Merle, Baltimore
 Wesner, Lawrence Everingham, Baltimore

SECOND YEAR DAY CLASS

Barron, William Wallace, Baltimore
 Buzzell, Allen Eugene, Sparrows Point
 Carscaden, William Robert, Cumberland
 Cullen, Richard Edmund, Delmar, Del.
 Ewing, Sherley, Baltimore
 James, William Smith, Havre de Grace
 Jencks, Elizabeth Pleasants, Baltimore
 Karow, William Kenneth, Baltimore
 Lipin, Edward John, Pasadena
 Maginnis, Paul Tobin, Baltimore
 McFaul, Harry Algire, Baltimore
 Meyers, Amos I., Baltimore
 Moore, Charles Davis, Baltimore

Morton, James Cooke, Jr., Linthicum Heights
 Perman, Morris Louis, Baltimore
 Potts, Charles Joseph, Salisbury
 Rouse, John Gould, Jr., Baltimore
 Schaub, Edward Anthony, Jr., Baltimore
 Sfekas, Pete, Baltimore
 Sinskey, Henry Lyon, Jr., Baltimore
 Struzinski, Henry Paul, Baltimore
 Toulia, Jaroslav Jerry, Baltimore
 Tyler, J. Edward, III, Baltimore
 Warhol, John, Jr., Mahwah, N. J.
 Welsh, John Thomas, Cumberland
 Williams, Robert Hope, Jr., Baltimore

SECOND YEAR EVENING CLASS

Athey, William Bernard, II, Severna Park
 Boyd, J. Frank, Barstow
 Boyd, Omar Klauder, Baltimore
 Cohen, Jerome Bernard, Baltimore
 Cooper, Norman Edgar, Baltimore
 Culverwell, J. Mason, Sparrows Point
 Daneker, Clayton W., Baltimore
 Dunn, Sylvan Raymond, Baltimore
 Dunnington, Frank Patterson, Jr., Baltimore
 Ferguson, Jean, Baltimore
 France, Ralph Hayward, Baltimore
 Goldberg, Herman, Baltimore
 Harding, Henry Joseph, Baltimore
 Higinbotham, Edward Dulany, Bel Air
 Hoffman, Grace, Baltimore

Hohman, Martin Aloysius, Baltimore
 Hood, Mary Dorothy, Baltimore
 Hopkins, Samuel, Catonsville
 Jackson, Charles Elmer, Jr., Baltimore
 Karasik, Abe Sidney, Baltimore
 Katzenstein, Alvin, Baltimore
 Kelly, Caleb Redgrave, Baltimore
 McIntyre, Edward LeRoy, Baltimore
 Mitchell, Joseph Paul, Baltimore
 Motry, George Oswald, Baltimore
 Mueller, Henry Anthony, Baltimore
 Sattler, Eugene Joseph, Baltimore
 Silverman, Arnold, Baltimore
 Storm, Edward Daniels, Frederick
 Sybert, Edward James, Elkridge
 Thompson, Charles Wellington, Baltimore

FIRST YEAR DAY CLASS

Archer, Robert Harris, Jr., Bel Air
 Ayres, Mary Ann, Ocean City
 Barbour, John Kent, Jr., Baltimore
 Barrett, John Herbert, Jr., Baltimore
 Bartlett, Thomas Rogers, Baltimore
 Beck, James Dudley, Baltimore
 Beck, S. Scott, Jr., Chestertown
 Bell, Julius Raymond, Baltimore
 Benjamin, Paul Elmer, Baltimore
 Benson, Alvin LaMar, Westminster

Bernstein, Leonard Samuel, Baltimore
 Clark, John Lawrence, Ellicott City
 Colgan, C. Warren, Baltimore
 Dove, Samuel Busey, Jr., Annapolis
 Duggan, William Matthew, Aberdeen
 Earnshaw, Benjamin Arthur, Baltimore
 Ellis, Joseph Alpheus, Hebron
 Evarts, Roger Sherman, Towson
 Farrell, Joseph William, Baltimore
 Filler, Edwin Walter, Baltimore

Frailey, Carson Gray, Emmitsburg
 Garfunkel, Sylvan Adler, Savannah, Ga.
 Gillis, Lee Seth, St. Michaels
 Goldstein, Louis Lazarus, Prince Frederick
 Handy, Francis Davis, Baltimore
 Harkness, David Arthur, Mutual
 Hecht, Isaac, Baltimore
 Hopkins, Roger Brooke, Jr., Woodbrook
 Horsey, Thomas Clayton, Jr., Greensboro
 Jacob, John Edwin, Jr., Baltimore
 Kirsner, Milton Franklin, Baltimore
 Laughlin, James Francis, Jr., Westport
 Long, Eloise Genevieve, Salisbury
 Long, John William, Fruitland
 Love, Richard Harvey, Hyattsville
 Macgill, James, Simpsonville
 Magers, John Edgar, Jr., Ruxton
 McGreevy, John Rowan, Baltimore
 Meiser, Woodrow Wilson, Baltimore
 Meyer, Bernard Stern, Baltimore
 Mitchell, Robert Watson, Salisbury
 Murray, Donald Gaines, Baltimore

FIRST YEAR EVENING CLASS

Alexander, Eugene Archibald, Frederick
 Andrew, Thomas Gordon, Baltimore
 Banks, Talbot Winchester, Baltimore
 Barclay, Frederick Henry, Jr., Baltimore
 Blackhurst, James Watts, Baltimore
 Bowles, Martin Clint, Baltimore
 Buppert, Doran Henry, Baltimore
 Clark, Louis Dorsey, Ellicott City
 Cohen, Irvin Henry, Baltimore
 Coughlin, Peter Cornelius, Baltimore
 Daley, James Lawrence,
 Jamaica Plain, Mass.
 Dyer, Harry E., Jr., Havre de Grace
 Farinholt, Leroy Whiting, Jr., Baltimore
 Green, Thomas Opie, Jr., Towson
 Hardesty, S. Aloysius, Baltimore
 Hart, Matthew H., Baltimore
 Hartzell, Harry Oscar, Jr., Baltimore
 Haydon, Robert Lee, Jr., Hyattsville
 Hopkins, John Henry, IV, West River
 Jobson, George Jarvis, Catonsville
 Joyce, Jerome Joseph, Baltimore
 Kirby, Raymond Aloysius, Baltimore
 Kolker, Fabian Homer, Baltimore
 Kutz, Harvey Doner, Baltimore
 Lassotovitch, Vladimir Stephen,
 Havre de Grace

UNCLASSIFIED DAY

Martin, Richard, Baltimore

UNCLASSIFIED EVENING

Coonan, Margaret Elizabeth, Baltimore
 Loden, Joseph Daniel, Catonsville
 Scoll, Hannah-Leah, Baltimore

Nowak, Henry Lawrence, Wilmington, Del.
 Ostroff, Julius Joseph, Baltimore
 Pearson, Craven Pearre, Jr., Elkridge
 Prettyman, Charles Wesley, Rockville
 Rascovar, Roy Lewis, Baltimore
 Riehl, Louis Milton, Lansdowne
 Robb, John MacDonald, Cumberland
 Round, Simeon Joseph, Baltimore
 Rubin, Jesse Jay, Baltimore
 Starr, John Edward, Hyattsville
 Sullivan, John Carroll, Jr., Baltimore
 Tull, Miles Tawes, Marion
 Waterman, Caroline Henrietta,
 Jacksonville, Fla.
 Weir, Albert Edward, Baltimore
 Welsh, Paul Edward, Baltimore
 Wenchel, John Philip, II,
 Washington, D. C.
 Whalin, Cornelius, Hyattsville
 Williams, Thomas Bayard, Jr., Baltimore
 Williamson, George Lewis, Cumberland

Levinson, Irvin Armand, Baltimore
 Loeser, Richard Alan, Baltimore
 Long, Hugh Blair Grigsby, Baltimore
 Lubinski, Edmund William, Baltimore
 Lunt, William Burnham, Baltimore
 Mackenzie, Robert Henry, Baltimore
 McKenrick, Stratford Eyre, Baltimore
 Newcomb, Lamar Adrian, Baltimore
 Peace, Robert Lee, Round Bay
 Plant, Albin Joseph, Baltimore
 Pcsner, Louis, Baltimore
 Rasin, Alexander Parks, Jr., Chestertown
 Redmond, James Albert, Jr., Baltimore
 Rich, Charles Stanley, Baltimore
 Rittenhouse, Charles Kieffer, Baltimore
 Russell, Turner Reuben, Baltimore
 Saks, Benson Jay, Baltimore
 Scherr, Max, Baltimore
 Schneider, John Zacharia, Catonsville
 Sheridan, Hugh Lewis, Baltimore
 Siemon, John Alfred, Baltimore
 Slowik, Lawrence Raymond, Baltimore
 Tiralla, Henry Merryman, Jr., Baltimore
 Tobler, John Oscar, Baltimore
 Topper, Bernard Carroll, Baltimore
 Wilson, Frank Kennedy, Jr., Baltimore
 Wisotzki, Clark Thompson, Baltimore

SCHOOL OF MEDICINE

GRADUATE STUDENTS

Beck, Frances Ford, Baltimore
 Carr, C. Jelleff, Baltimore
 Dozois, K. Pierre, Baltimore
 Evans, William Ellsworth, Jr., Baltimore

Painter, Elizabeth Edith, Baltimore
 Teitelbaum, Harry Allen, Brooklyn, N. Y.
 Thompson, James Upshur, Cambridge

SENIOR CLASS

Batalion, Abraham Louis, Baltimore
 Beers, Reid Lafeal, Salt Lake City, Utah
 Bernstein, Milton, Baltimore
 Bieren, Roland Essig, Baltimore
 Booth, Harold Thomas, North Tarrytown,
 N. Y.
 Bowie, Harry Clay, La Plata
 Bunn, James Harry, Jr., Henderson, N. C.
 Burka, Irving, Washington, D. C.
 Burns, Harold Hubert, Girardville, Pa.
 Burton, Jerome Kermit, Catonsville.
 Bush, Joseph Edgar, Hampstead
 Chesson, Andrew Long, Elizabeth City,
 N. C.
 Coplin, George Joseph, Elizabeth, N. J.
 Ctibor, Vladimir Frantisek, Ridgewood,
 N. J.
 Curtis, Leo Michael, Baltimore
 Davidson, Nachman, Baltimore
 Davis, George Howey, Brunswick
 Deehl, Seymour Ralph, Elizabeth, N. J.
 Dittmar, Stuart Watt, Ingram, Pa.
 Dixon, Darius McClelland, Oakland
 Drozd, Joseph, Baltimore
 Feldman, Jerome, Baltimore
 Fissel, John Edward, Jr., Baltimore
 Fox, Lester Mitchel, Baltimore
 Franklin, Philip Lair, Baltimore
 Frich, Michael Garland, Belle Vernon, Pa.
 Gillis, Marion Howard, Jr., St. Michaels
 Gimbel, Harry Solomon, Baltimore
 Glassner, Frank, Baltimore
 Gordner, Jesse Walter, Jr., Jerseytown, Pa.
 Greengold, David Bernard, Annapolis
 Gregory, Philip Orson, Boothbay Harbor,
 Me.
 Greifinger, William, Newark, N. J.
 Grollman, Jaye, Baltimore
 Herman, Daniel Loeb, Baltimore
 Isaacs, Benjamin Herbert, Baltimore
 Jones, Ceirianog Henry, Scranton, Pa.
 Jones, Emory Ellsworth, Jr., Mount Hope,
 W. Va.
 Karfgin, Walter Esselman, Baltimore
 Karpel, Saul, New York, N. Y.
 Katz, Joseph, Baltimore
 Kleiman, Norman, Baltimore
 Knobloch, Howard Thomas, Greensburg, Pa.

Kolodner, Louis Joseph, Baltimore
 Kroll, Louis Joseph, Baltimore
 Lipin, Raymond Joseph, Pasadena
 Lowman, Robert Morris, Baltimore
 Lund, Grant, St. George, Utah
 Mansfield, William Kenneth, Carnegie, Pa.
 Maser, Louis Robert, Baltimore
 McCauley, Arthur Franklin, Baltimore
 McKnew, Hector Caldwell, Jr., Riverdale
 McNinch, Eugene Robinson, West Alexan-
 der, Pa.
 Moran, James Blessing, Providence, R. I.
 Moran, James Patrick, New York, N. Y.
 Moses, Benjamin Bernard, Baltimore
 Myerovitz, Joseph Robert, Baltimore
 Myers, William, Pittsburgh, Pa.
 Nester, Hansford Dorsey, Ronceverte, W.
 Va.
 Nestor, Thomas Agnew, Providence, R. I.
 Nicholson, Morris John, Dundalk
 Nowak, Sigmund Roman, Baltimore
 O'Brien, William Aloysius, Jr., Passaic,
 N. J.
 Parr, William Andrew, Baltimore
 Pembroke, Richard Heber, Jr., Park Hall
 Pentecoste, Salvador Dante, Bloomfield,
 N. J.
 Pigman, Carl, Farraday, Kentucky
 Reichel, Samuel Marvin, Annapolis
 Reynolds, John Henry, Jr., Kennett Square,
 Pa.
 Rochlin, Narcisse, Baltimore
 Roseman, Ralph Bernard, Philadelphia, Pa.
 Rosenthal, Victor, Brooklyn, N. Y.
 Royster, James Dan, Bullock, N. C.
 Schmieler, George Peter, Pittsburgh, Pa.
 Selby, George Durward, Baltimore
 Shimanek, Lawrence Joseph, Baltimore
 Smith, William Carey, Goldsboro, N. C.
 Solomon, Cyril, Baltimore
 Sorin, Matthew, Jersey City, N. J.
 Spain, David Michael, Brooklyn, N. Y.
 Squires, Millard Fillmore, Jr., Elkton
 Stapen, Milton Honore, Brooklyn, N. Y.
 Stecher, Joseph Louis, Baltimore
 Steinberg, Samuel, Baltimore
 Stern, Morris Harold, Passaic, N. J.
 Sunday, Stuart Dos Passos, Baltimore

Terr, Isaac, New York, N. Y.
 Thomas, Anthony Joseph, New Bedford,
 Mass.
 Tierney, Lawrence Matthew, West Haven,
 Conn.
 Troutman, Baxter Suttles, Addor, N. C.
 Vieweg, George Louis, Jr., Wheeling, W.
 Va.
 Waller, William Kennedy, Baltimore

Wehner, Daniel George, Baltimore
 Weinstein, Jacob Joseph, Baltimore
 Wells, Gibson Jackson, Baltimore
 Wilfson, Daniel, Jr., Baltimore
 Wilkinson, Arthur Gilbert, Orange, Conn.
 Wolf, Nathan, Baltimore
 Yavelow, Charles Sidney, Mount Vernon,
 N. Y.
 Zimring, Joseph George, Brooklyn, N. Y.

JUNIOR CLASS

Abbott, Thomas Gilbert, Baltimore
 Bank, R. Stanley, Baltimore
 Barnett, Ernest, New York, N. Y.
 Bereston, Eugene Sydney, Baltimore
 Brill, Leonard, Baltimore
 Burtnick, Lester Leon, Baltimore
 Carlson, Carl Edwin, New Haven, Conn.
 Casanova Diaz, Jose Ramon, Hato Rey,
 Puerto Rico
 Christensen, Roland Arnold, Philadelphia,
 Pa.
 Cocimano, Joseph Michael, Washington,
 D. C.
 Cooney, Robert Francis, Scranton, Pa.
 Coughlan, Stuart Gray, Baltimore
 Daily, Louis Eugene, Baltimore
 D'Alessio, Charles Magno, Derby, Conn.
 D'Amico, Thomas Vincent, Newark, N. J.
 Davidson, Eli, New York, N. Y.
 Deradorian, Neshon Edward, New Britain,
 Conn.
 Diggs, Everett Schnepfe, Baltimore
 Eisner, William Monroe, Brooklyn, N. Y.
 Ellison, Emanuel Simon, Baltimore
 Ensor, Helen Robinson, Baltimore
 Feldman, Philip Michael, Brooklyn, N. Y.
 Finn, John Hannon, Pittsfield, Mass.
 Frenkil, James, Baltimore
 Frohman, Isaac, Baltimore
 Gehlert, Sidney Richard, Baltimore
 Gillespie, John Lawrence, Arlington, N. J.
 Goffin, Herbert, New York, N. Y.
 Goldberg, Sigmund, Baltimore
 Gordon, William Cecil, Brooklyn, N. Y.
 Gore, Robert Joseph, Baltimore
 Gottdiener, Elvin Edward, Baltimore
 Greenwald, Frank, New York, N. Y.
 Hahn, Charles Solomon, Brooklyn, N. Y.
 Hedrick, Grover Cleveland, Jr., Beckley,
 W. Va.
 Highstein, Benjamin, Baltimore
 Hochfeld, Leo, New York, N. Y.
 Hodgson, Eugene Welch, Houston, Pa.
 Hoffman, Charles Wilbur, Jr., Baltimore
 Humphries, William Coolidge, Baltimore
 Insley, James Knox, Jr., Baltimore

Jackson, Samuel, New York, N. Y.
 Jacobson, Alan, Baltimore
 Johnston, Clarence Frederick, Jr., Balti-
 more
 Jones, James Porter, Pennsboro, W. Va.
 Kadan, J. Earl, Baltimore
 Kagen, Gordon Arthur, Reading, Pa.
 Kaltreider, D. Frank Olewiler, Jr., Red
 Lion, Pa.
 Kaplan, Isadore, Baltimore
 Kaplan, Jack Allen, Brooklyn, N. Y.
 Kaplan, Nathan, Baltimore
 Katz, Albert Herbert, Baltimore
 Katz, Isadore, Brooklyn, N. Y.
 Kemick, Irvin Bernard, Baltimore
 Klemkowski, Irvin Philip, Baltimore
 Kolman, Lester Norman, Baltimore
 Kunkowski, Mitchell Frank, Baltimore
 LaMar, David William, Middletown
 Leskin, Louis, Brooklyn, N. Y.
 Levine, Leonard Warren, Hartford, Conn.
 Levinson, Leonard Jules, Brooklyn, N. Y.
 Linhardt, Elmer George, Eastport
 Lisansky, Ephraim Theodore, Baltimore
 Long, William Broughton, Jr., Princess
 Anne
 Lubinski, Chcster James, Baltimore
 Mackowiak, Stephen Casimir, Dundalk
 Manieri, Frank Vincent, Baltimore
 Marino, Irene Thelma, Allegany, N. Y.
 Matheke, Otto George, Jr., Newark, N. J.
 Meyer, Milton Joseph, Jamaica, L. I., N. Y.
 Muller, S. Edwin, Bradshaw
 Muse, Joseph Ennalls, Baltimore
 Myers, Philip, Baltimore
 Nataro, Maurice, Newark, N. J.
 Novey, Samuel, Baltimore
 Owens, Richard Spurgeon, Jr., Roanoke,
 Va.
 Pass, Isidore Earl, Baltimore
 Pavlatos, August Constantine, Lancaster,
 Pa.
 Perlman, Lawrence, Ridgewood, N. Y.
 Piccolo, Pasquale Albert, New Haven,
 Conn.
 Pokrass, Fred Phillip, Towanda, Pa.

Resnick, Elton, Baltimore
 Revell, Samuel Thompson Redgrave, Jr.,
 Louisville, Ga.
 Rigdon, Henry Lewis, Aberdeen
 Robins, Isadore Morris, Luzerne, Pa.
 Robinson, Martin Herman, Philadelphia,
 Pa.
 Rochkind, Reuben, Baltimore
 Roseman, Ephraim, Baltimore
 Rubin, Morris, New Haven, Conn.
 Rudman, Gilbert Elmore, Baltimore
 Safran, Sidney, Baltimore
 Sakowski, John Paul, Bayonne, N. J.
 Sartorius, Norman Ellis, Jr., Pocomoke
 City
 Scarborough, Clarence Parke, Jr., Delta,
 Pa.
 Schmidt, Jacob Edward, Baltimore
 Schmulovitz, Maurice Jacob, Baltimore
 Seegar, John King Beck Emory, Baltimore
 Seidel, Joshua, Baltimore

Semoff, Milton C. F., Sea Gate,
 New York Harbor, N. Y.
 Shapiro, Abraham Albert, Baltimore
 Shear, Meyer Robert, Baltimore
 Spielman, Morton Marvin, Baltimore
 Stapen, Mannie, Brooklyn, N. Y.
 Statman, Bernhardt Joseph, Newark, N. J.
 Steiner, Albert, Baltimore
 Sullivan, Thomas John, Teaneck, N. J.
 Suwalsky, Sydney, Hartford, Conn.
 Trupp, Mason, Baltimore
 Weems, George Jones, Prince Frederick
 Weiss, Henry Wolf, Ellenville, N. Y.
 Whitworth, Frank Dixon, Westernport
 Wilkin, Mabel Giddings, Houston, Texas
 Williams, Richard Jones, Cumberland
 Williams, Robert Roderic, Rochester, N. Y.
 Wolff, Eldridge Henry, Cambridge
 Woodrow, Jack Henry, Yonkers, N. Y.
 Zacek, Frank Anthony, Webster, Mass.
 Zeligman, Israel, Baltimore

SOPHOMORE CLASS

Abarbanel, Milton G., Jersey City, N. J.
 Abramson, Daniel Jerome, Baltimore
 Applefeld, Willard, Baltimore
 Baum, Max, Baltimore
 Bonner, Robert Alexander, Jr., Waterbury,
 Conn.
 Borden, Melvin Nachlas, Baltimore
 Bowers, John Zimmerman, Catonsville
 Bradley, Stanley Edward, Baltimore
 Brooks, Wilbur Starr, New York, N. Y.
 Brown, Manuel, Baltimore
 Bunting, John James, Clifton, N. J.
 Callahan, Timothy Andrew, Jr., Bel Air
 Chance, Burton, Jr., Radnor, Pa.
 Cohen, Hilliard, Baltimore
 Colleran, Harold Leo, Jessup, Pa.
 Coolahan, John Francis, Baltimore
 Cooper, Donald Dwight, Towson
 Costas, Jaime Luis, Ponce, Puerto Rico
 Cowherd, William Jerome, Long
 Crawford, Robert Clifford, Baltimore
 Dausch, Michael Joseph, Baltimore
 Dodd, William Anthony, Baltimore
 Dolfman, Victor, Philadelphia, Pa.
 Eichert, Arnold Herman, Woodlawn
 Feder, Aaron, Jackson Heights, N. Y.
 Fox, Lester Irving, Haverhill, Mass.
 Fox, Samuel Louis, Baltimore
 Gareis, Louis Calvin, Baltimore
 George, Joseph Mathias, Jr., Sudlersville
 Gertman, Samuel, Baltimore
 Gibel, Harry, Brooklyn, N. Y.
 Ginsberg, Milton, Baltimore
 Glassman, Edward Lewin, Baltimore

Goodman, Louis E., Jr., Baltimore
 Goodman, Sylvan Chauncey, Baltimore
 Gottdiener, Florence Harris, Baltimore
 Govons, Sidney Robert, Baltimore
 Graff, Frederick Lewis, Parkersburg,
 W. Va.
 Guyton, William Lehman, Baltimore
 Haase, John Henry, Baltimore
 Harris, Sidney, Paterson, N. J.
 Hayleck, Mary Lodema, Baltimore
 Horky, John Ralph, Bel Air
 Januszeski, Francis Joseph, Baltimore
 Katz, Milton Aaron, Westminster
 Kelmenson, Harry, Baltimore
 Knox, John Joseph, Gettysburg, Pa.
 Kotleroff, Jerome, Brooklyn, N. Y.
 Kump, Albert Barker, Bridgeton, N. J.
 Kurtz, Gerald Independence, Paterson, N. J.
 Ladensky, Milton, Baltimore
 Lauve, Celeste Constance, Baltimore
 Lenker, Luther Albert, Harrisburg, Pa.
 Lipsitz, Morton Hirsch, Baltimore
 Lopez, Hilton Louis, Mayaguez, Puerto Rico
 Lumpkin, William Randolph, Baltimore
 Michaelson, Ernest A., Bladensburg
 Milholland, Arthur Vincent, Baltimore
 Miller, Clarence Lee, Hannibal, Mo.
 Miller, Royston, Baldwin
 Miniszek, James Haight, Baltimore
 Molofsky, Leonard Carl, Baltimore
 Palmer, David Waugh, Wheeling, W. Va.
 Post, Laurence Caldwell, Buckhannon,
 W. Va.
 Powell, Geraldine Kennedy, Baltimore

Rizzolo, John, Newark, N. J.
 Roman, Paul, Baltimore
 Rossello, Juan A., Ponce, Puerto Rico
 Rothkopf, Henry, Ellenville, N. Y.
 Sabatino, Bernard Joseph, Baltimore
 Sarajian, Aram Martyr, Ridgefield Park, N. J.
 Schaefer, John Ferdinand, Baltimore
 Schammel, Adam John, Baltimore
 Schenthal, Joseph Edwin, Baltimore
 Scherlis, Sidney, Baltimore
 Schlesinger, Robert Abraham, Flushing, N. Y.
 Scott, John Matthai, Baltimore
 Sevcik, Charles Vincent, Baltimore
 Sheppard, Robert Clay, Baltimore
 Siegel, Edward, Poughkeepsie, N. Y.
 Silberman, Donald Jared, Birmingham, Alabama
 Smith, John P., Baltimore

Sprei, Emanuel, New York, N. Y.
 Stein, Aaron, Baltimore
 Steinberg, Morris William, Baltimore
 Swiss, Adam George, Baltimore
 Thomas, Bernard Oscar, Frederick
 Thompson, Winfield Lynn, Rehoboth
 Twardowicz, Albin Harry, Baltimore
 Urlock, John Peter, Jr., Baltimore
 Vollmer, Frederick Joseph, Baltimore
 Wagner, John Alfred, Baltimore
 Warres, Herbert Leonard, Brooklyn, N. Y.
 Welfeld, Alvan Abram, Baltimore
 White, Harry Fletcher, Jr., Baltimore
 White, S. Cottrell, Baltimore
 Winer, Albert Sidney, Baltimore
 Woodward, Theodore Englar, Westminster
 Worthington, Richard Walker, Baltimore
 Wulwick, Michael, Brooklyn, N. Y.
 Yaffe, Kennard Levinson, Baltimore

FRESHMAN CLASS

Aaron, James Philip, Jr., Baltimore
 Abrahams, John James, Port Deposit
 Algire, Glenn Horner, Baltimore
 Baile, John Ray, New Windsor
 Baylus, Herman, Baltimore
 Beck, Harry McBrine, Baltimore
 Berman, Edgar Frank, Baltimore
 Bernstein, Aaron, Baltimore
 Bernstein, Albion Older, New York, N. Y.
 Bess, Elizabeth Grant, Keyser, W. Va.
 Brezinski, Edward Joseph,
 Perth Amboy, N. J.
 Briele, Henry Alison, Baltimore
 Brodsky, Bernard, Brooklyn, N. Y.
 Cianos, James Nicholas, Baltimore
 Coffman, Robert Thornhill, Keyser, W. Va.
 Cohen, Frank Samuel, Baltimore
 Conley, Carroll Lockard, Baltimore
 Corbitt, Richard Wylie, Parkersburg, W. Va.
 Cunningham, Raymond Murray, Baltimore
 Evans, Virginia John, Baltimore
 Filtzer, David Leonard, Baltimore
 Fine, Morton Norman, Baltimore
 Fink, Francis Thomas, Baltimore
 Fish, Eugene Arthur, Baltimore
 Freed, Arnold Ulysses, Baltimore
 Fusting, William Hammond, Baltimore
 Gaver, Leo Junior, Myersville
 Goldberg, Nathan Zanvyl, Baltimore
 Goldberg, Raymond Bernard, Baltimore
 Goldberg, Sylvan David, Baltimore
 Grier, George Smith, III, Milford, Del.
 Grott, Harold Allan, Baltimore
 Haimowitz, Samuel Isaac, Philadelphia, Pa.

Hartman, Oscar, Baltimore
 Hartz, Alvin Sidney, Baltimore
 Heimoff, Leonard Lincoln, New York, N. Y.
 Hooker, Charles Bullard, Takoma Park
 Hutchins, Thomas Manning, Bowens
 Isaacson, Benjamin, Hyattsville
 Jandorf, R. Donald, Baltimore
 Jannarone, Lewis Henry, Belleville, N. J.
 Jones, Charles Wilson, Baltimore
 Kairys, David, Baltimore
 Kammer, William Henry, Jr., Baltimore
 Kappelman, Melvin Daniel, Baltimore
 Keister, Philip Weyforth, Lansdowne
 Kerr, James Patterson, Jr., Boyd
 Kiely, James Arthur, Cortland, N. Y.
 Kinnamon, Howard Franklin, Jr., Easton
 Kleiman, Bernard Stanley, Baltimore
 Kurland, Albert Alexander, Baltimore
 Kyle, Henry Hall, Waterbury
 Lapinsky, Herbert, Brooklyn, N. Y.
 Lavenstein, Arnold Fabian, Baltimore
 Layman, William Templeton, Hagerstown
 Leitch, William Harvey, Friendship
 Levin, Bernard, Baltimore
 Magness, Stephen Lee, Baltimore
 Magruder, John Robinson, Baltimore
 Marks, Irving Lowell, Baltimore
 McClafferty, William James, Jr.,
 West Warwick, R. I.
 McGinity, Francis Rowland, Baltimore
 McLaughlin, Francis Joseph, Towson
 Meyer, Alvin Francis, Brooklyn, N. Y.
 Miller, William Shepherd, Baltimore
 Minor, Michael Maurice, Kelayres, Pa.

Moran, John Anthony, Conway, Mass.
 Nuttall, James Baker, Sharptown
 Polek, Melvin Frank, Baltimore
 Reimann, Dexter LeRoy, Baltimore
 Richter, Conrad Louis, Baltimore
 Rochberg, Samuel, Passaic, N. J.
 Ruzicka, Edwin Russell, Baltimore
 Sadove, Max Samuel, Baltimore
 Scher, Isadore, Baltimore
 Sexton, Thomas Scott, Sistersville, W. Va.
 Siegel, Maurice Bert, Brooklyn, N. Y.
 Smoak, Philip Laurens, Tampa, Fla.
 Solarz, Sylvan Daniel, Baltimore
 Spiegel, Herbert, McKeesport, Pa.
 Steger, William Joseph, Wheeling, W. Va.

Stevens, Leland Bates, Millington
 Stires, Carroll Chapin, Baltimore
 Tartikoff, George, Brooklyn, N. Y.
 Taylor, William Wallace, Williamsport
 Thomas, Ramsay Berry, Towson
 Wallenstein, Leonard, Baltimore
 Wanner, Jesse Rosenberger, Jr., Salisbury
 Weisberg, Millard, Baltimore
 Whitworth, Fuller Barnard, Westernport
 Wilder, Milton Jay, Baltimore
 Williams, Herman Joseph, Reading, Pa.
 Wilner, Sol, New York, N. Y.
 Wilson, Harry Thomas, Jr., Baltimore
 Zalis, Daniel Leonard, Baltimore

SPECIAL STUDENT

Wylie, Alice Bonsal, Baltimore

SCHOOL OF NURSING

GRADUATE STUDENTS

Evans, Ethel Irene, Dundalk
 Hoddinott, Beatrice Edison, Harrington, Del.
 Price, Ruth Rattenbury, Denton

Rullman, June, Towson
 Shimp, Marie Hopfield, Baltimore
 Wilson, Lillian Louise, Pocomoke City

SENIOR CLASS

Bowling, Vernice Lee, Elm City, N. C.
 Claiborne, Nina Stirling, Beckley, W. Va.
 Connelly, Frances Emily, Rising Sun
 DeLawter, Margaret Tressa, Williamsport
 Dodson, Ruth Elizabeth, Baltimore
 Dooley, Angela Rose, Linthicum Heights
 Fowble, Mary Eleanor, Upperco
 Heilman, Marian Elizabeth, Weirton, W. Va.
 Johannes, Norma Louise, Pekin, Ill.
 Kefauver, Mary Catherine, Smithsburg
 Knoeller, Mary Olree, Waverly, Va.
 Lindsay, Grace Elizabeth, Lexington, N. C.
 Lloyd, Glylispie Doris, Whiteford

Lubinski, Sophie Ann, Baltimore
 Magaha, Annabelle Louise, Frederick
 Miller, Hazel Almeda, Fawn Grove, Pa.
 Myers, Charlotte Fisher, Baltimore
 Odom, Marguerite, Ahoskie, N. C.
 O'Sullivan, Anne Jessup, Hertford, N. C.
 Riley, Della Pauline, Emmitsburg
 Rose, Margaret Bowen, Atlanta, Ga.
 Smith, Florence Beryl, Marlinton, W. Va.
 Tayloe, Frances, Ahoskie, N. C.
 Thomas, Lucile Gordon, Jefferson, S. C.
 Thompson, Ruby Jean, Logan, W. Va.
 Wicker, Virginia Dare Courtney, Danville, Va.

INTERMEDIATE CLASS

Banes, Mary Virginia, Manokin
 Bosley, Wanda Delphine, White Marsh
 Carpenter, Catherine E., Waverly, Va.
 Cook, Frances Julia, Catonsville
 Cornelius, Sarah, Baltimore
 Cramer, Mildred Elizabeth, Walkersville
 Dallmus, Esther Mary, Baltimore
 Fadeley, Anne Elizabeth, Havre de Grace
 Hersh, Naomi Grace, Manchester
 Hooe, Mina Geraldine, Charles Town, W. Va.
 Kautz, Marjorie Lucile, Somerset, Pa.

Kluka, Mary, Farrell, Pa.
 Knight, Sallie Frances, Courtland, Va.
 Lewis, Evelyn Edith, Havre de Grace
 Mattson, Evelyn Lucile, Baltimore
 McArthur, Muriel Hill, Charleston, S. C.
 Moye, Louise Manning, Goldsboro, N. C.
 O'Connor, Beatrice Patricia, Sanford, Fla.
 Parks, Willye Frances, Parksley, Va.
 Pennington, Rose, Bel Air.
 Pilgrim, Beatrice Lorraine, Chambersburg, Pa.
 Quarterman, Lena Winifred, Nicholls, Ga.

Rayme, Carolyn Roberta, Fullerton
 Rudisill, Mary Laurie, Iron Station, N. C.
 Sappington, Frances Virginia, Hagerstown
 Scarborough, Dusetta Elizabeth, Street
 Shaffer, Charlotte Eileen, Hampstead
 Sherrill, Evelyn Frelove, Sparks
 Skinner, Mary Imogene, Shepherdstown,
 W. Va.
 Slick, Jane Isabelle, Hagerstown

Stauffer, Eleanor Frances, Cardiff
 Strickland, Elizabeth R., Curwensville, Pa.
 Sutton, Edna Earl, Goldsboro, N. C.
 Toom, Dorothy, Knoxville, Iowa
 Turner, Margaret Catherine, Mayodan,
 N. C.
 Wagner, Helen Kathryn, Barrackville,
 W. Va.
 Wilson, Mabel Jane, Belleville, Pa.

JUNIOR CLASS

*Bates, Victoria Willard, Greenville, S. C.
 *Baughman, Anna Mildred, Somerset, Pa.
 *Coleman, Dorothy Ellen, Livermore, Pa.
 *Coleman, Myrtle Ashley, Baltimore
 *Connelly, Nancy Virginia, Rising Sun
 *Dees, Mary Ann, Goldsboro, N. C.
 *Gambill, Treva Lou, Bel Air
 *Garrison, Alice Virginia, Washington,
 D. C.

*Haugh, Gwendolyn, Upperco
 *McNabb, Lena, Greeneville, Tenn.
 *Monath, Vivian Virdin, Hagerstown
 *Stephenson, Doris Virginia, Baltimore
 *Strawbridge, Minnie Gemmill,
 Fawn Grove, Pa.
 *Tharpe, Iva Lois, Bel Air
 *Wilson, Kathryn, Randallstown

PROBATION CLASS

Albright, Ann Elizabeth, Nanticoke
 Bowling, Ada Grey, Elm City, N. C.
 Bunn, Mildred Wilson, Spring Hope, N. C.
 Burbage, Katharine Elizabeth, Salisbury
 Cox, Mildred Juanita, Four Oaks, N. C.
 Crumpler, Daisy Marie, Elm City, N. C.
 Dixon, Dorothy Lee, Wilmington, N. C.
 Dorsett, Frances Elizabeth, Indian Head
 Eckenrode, Mary Rachel, Manchester
 Elmore, Dorothy Margaret, Baltimore
 Ensor, Beatrice Frances, Westminster
 Finks, Ruth Anna, Marshall, Virginia
 Flint, Mary Jane, Bowden, W. Va.
 Forsyth, Jane Norma, Berwyn
 Graham, Carola Beatrice, Hampstead
 Griesemer, Emma Louise, Baltimore
 Hanna, Lois Catherine, Mount Solon, Va.
 Hedrick, Anna Lee, Beckley, W. Va.
 Jones, Florence Ellen, Waynesboro, Pa.
 Kalar, Nelda, Westminster
 Kalbaugh, Mary Esther, Luke
 Kroh, Louise Emily, Chase

Lepley, Mary Catherine, Hyndman, Pa.
 Llewellyn, Anne Parry, Cockeysville
 Mathias, Gladys Louise, Currituck, N. C.
 Mays, Sara Jane, Cockeysville
 Powers, Lucille Cornelia, Brunswick
 Rafter, Helen Brownie, Morristown, N. J.
 Reaney, Evelyn Anna, Takoma Park
 Schmid, Rosina Dorothy, Baltimore
 Selkamaa, Ingrid Elizabeth, Warren, Ohio
 Shapro, Evelyn Lucille, Frederick
 Stephens, Katherine Elizabeth, Hertford,
 N. C.
 Streett, Flora Mitchell, Street
 Terry, Virginia Annette, Washington,
 D. C.
 Walker, Alice Jane, Ellicott City
 Walter, Emma Lucinda, Hanover, Pa.
 Wert, Janice Marguerite, Sparrows Point
 Winfield, Irma Hott, Rohrsersville
 Yarrison, Freda Isabel, Williamsport, Pa.
 Yeager, Susan Margaret, Thomas, W. Va.

SCHOOL OF PHARMACY

GRADUATE STUDENTS

Bruening, Charles Frederick, Baltimore
 Cwalina, Gustav Edward, Baltimore
 DeDominicis, Amelia Carmel, Baltimore
 Dunker, Melvin Frederick William, Balti-
 more
 Hunt, William Howard, Baltimore
 Ichniowski, Casimer Thaddeus, Baltimore
 Jacobs, Marion Lee, Chapel Hill, N. C.

Mandrow, Mary Anna, White Marsh
 Miller, Howard Anthony, Rochester, N. Y.
 Millett, Sylvia, Pen Mar
 Purdum, William Arthur, Baltimore
 Rice, Robb Vernon, Missoula, Montana
 Roberts, Bertran S., Westernport
 Rosen, Harry, Washington, D. C.
 Zervitz, Max Morton, Baltimore

*Entered probation class, February 1, 1935.

Promoted to junior class, August 1, 1935.

SENIOR CLASS

Bellman, Frank Albert, Baltimore
 Berkowich, Melvin Irvin, Oxford, Pa.
 Cherry, Bernard, Baltimore
 Cohen, Sammie Herbert, Baltimore
 David, Irvin, Baltimore
 Foster, Carroll Pross, Baltimore
 Freedman, Albert, Baltimore
 Hewing, Ada Chamberlain, Baltimore
 Hoffman, Asher, Baltimore
 Jacobs, Harry, Baltimore
 Jankiewicz, Frank Joseph, Baltimore
 Kamber, Bertram, Baltimore
 Kandel, Leonard Elliot, Baltimore
 Katz, Gabriel Elliott, Baltimore
 Kleczynski, Thomas Carter, Baltimore
 Levin, Benjamin, Baltimore
 Levin, Nathan, Baltimore
 Libowitz, Aaron M., Baltimore
 Liss, Nathan Isaac, Baltimore
 McNamara, Bernard Patrick, Baltimore
 Moskey, Thomas Andrew, Jr., Washington,
 D. C.

Muskatt, Edith, Baltimore
 Ogurick, Alexander, Baltimore
 Paul, Frank Ronald, Baltimore
 Platt, William, Baltimore
 Rachuba, Lawrence William, Baltimore
 Reamer, Sidney Harold, Baltimore
 Robinson, Harry Bernard, Baltimore
 Robinson, Raymond Clarence Vail, Balti-
 more
 Rodney, George, Baltimore
 Sause, Milton Philip, Baltimore
 Shochet, Sidney, Baltimore
 Silberg, Harvey Gerald, Baltimore
 Silverman, Sylvan, Baltimore
 Smith, William Harry, Jr., Baltimore
 Survil, Anthony Adolph, Baltimore
 Tenberg, David Paul, Baltimore
 Thompson, Paul Howard, Waubay, S. D.
 Tramer, Arnold, Baltimore
 Winakur, Arthur, Baltimore
 Yaffe, Morris Robert, Baltimore
 Youch, Charles Anthony, Baltimore

JUNIOR CLASS

Allen, Benjamin Frank, Baltimore
 Alliker, Morris Joshua, Baltimore
 Alperstein, Reuben Robert, Baltimore
 Beck, Sylvan E., Baltimore
 Bliden, Abraham, Baltimore
 Brune, Richard C., Baltimore
 Cermak, Jerome Jerry, Baltimore
 Cohen, Hershel, Baltimore
 Crane, Warren Eugene, Loch Arbor, N. J.
 Damico, Samuel, Baltimore
 Dawson, Leroy Oldham, Baltimore
 Einbinder, Sylvan Phillip, Baltimore
 Ellerin, Albert Abraham, Baltimore
 Enten, Harry, Baltimore
 Fish, Herman Jesse, Baltimore
 Friedman, Charles S., Grafton, W. Va.
 Glickman, Shirley Madelyn, Baltimore
 Gounaris, Themistocles Nicholas, Baltimore
 Hanna, William Melvin, Baltimore
 Heyman, Albert, Baltimore
 Hoffman, Sylvan Allan, Baltimore
 Hope, Daniel, Jr., Ellicott City
 Inloes, Benjamin Harrison, Jr., Baltimore
 Karns, James Roscoe, Cumberland
 Karpa, Jerome Jay, Baltimore
 Kellough, Elmer Robert, Jr., Cumberland
 Kobin, Benny, Baltimore
 Kosakowski, Chester George, Baltimore
 Laken, Benjamin Bernard, Baltimore
 Levy, Frank Ferdinand, Raspeburg
 Lieb, Frank Joseph, Baltimore

Mayer, Alexander Maass, Baltimore
 Merkel, Henry, Baltimore
 Meusel, Jerome Andrew, Baltimore
 Miller, Milton, Baltimore
 Miller, Solomon, Baltimore
 Mindell, Charles, Baltimore
 Morgenstern, Emma Louise, Woodlawn
 Mouat, Gordon Anthony, Baltimore
 Musacchio, Leo Milton, Baltimore
 Myers, Irvin Louis, Baltimore
 Neutze, John Frederick, Baltimore
 Novak, Arthur Francis, Baltimore
 Nurkin, Bernice Vivian, Baltimore
 Pierpont, Ross Zimmerman, Woodlawn
 Purdum, Frank Lewis, Baltimore
 Rabinowitz, Irving Wolf, Baltimore
 Rapoport, Leonard, Baltimore
 Raudonis, John Anthony, Hudson, N. H.
 Rosenfeld, Israel Aaron, Baltimore
 Rutkowski, Edward Vincent Paul, Balti-
 more
 Santoni, Daniel Anthony, Baltimore
 Sapperstein, Edward Isidore, Baltimore
 Sborofsky, Isadore, Baltimore
 Scherr, Melvin Gerald, Baltimore
 Schumm, Frederick Albert, Baltimore
 Seechuk, William Walter, Baltimore
 Semer, Gerald Melvin, Baltimore
 Silverman, Irvin Israel, Baltimore
 Stone, Harry, Baltimore
 Supik, William Joseph, Baltimore
 Tompakov, Sylvan, Baltimore

Traband, Millard Tolson, Jr., Sudbrook Park
 Turner, Albert Franklin, Baltimore
 Valle, Philip Joseph, Baltimore
 Vondracek, John Wesley, Baltimore
 Walb, Winfield Alexander, Baltimore

Wasilewski, Theodore John, Baltimore
 Weiner, David, Baltimore
 Weisberg, Ruth R., Baltimore
 Winn, Solomon, Baltimore
 Zenitz, Bernard Leon, Baltimore

SOPHOMORE CLASS

Aaronson, Alfred Irving, Baltimore
 Beam, Merlin Ayler, Garrison
 Bixler, Richard Stevenson, New Windsor
 Boyd, Frank Elmer, Baltimore
 Bundick, William Ross, Baltimore
 Cohen, Bernard Isaac, Baltimore
 Colvin, Ralph, Baltimore
 Combs, Joseph Lee, Jr., Baltimore
 DiGristine, Charles Lawrence, Baltimore
 Edlavitch, Sam, Baltimore
 Feldman, Jack, Baltimore
 Floyd, Melvin Luther, Catonsville
 Fribush, Sidney, Baltimore
 Friedman, Marion, Baltimore
 Gakenheimer, Walter Christian, Catonsville
 Galley, Roland Paul, Baltimore
 Gendason, Harry Benjamin, Baltimore
 Giller, Morris, Baltimore
 Ginaitis, Alphonsus Stephen, Brooklyn Park
 Gregorek, Frank J., Baltimore
 Gude, William Diffenderffer, Baltimore
 Hager, George Philip, Jr., Baltimore
 Hamburger, Morton Leonard, Baltimore
 Hamlin, Kenneth Eldred, Jr., Baltimore
 Heyman, Bernice, Baltimore
 Hopkins, Carville Benson, Annapolis
 Jarowski, Charles, Baltimore
 Jones, Cyrus Francis, Baltimore
 Kaminkow, Joseph, Baltimore
 Kardash, Theodore, Baltimore
 Katz, Emanuel Oscar, Baltimore
 Katz, Morton, Baltimore
 Kelley, Gordon William, Baltimore

Kramer, Bernard, Baltimore
 Levin, Benjamin Samuel, Baltimore
 Levin, Jacob Benny, Baltimore
 Levin, Norman Jack, Baltimore
 Levy, Bernard, Baltimore
 Matelis, Olga Pauline, Baltimore
 Morgenstern, William August, Jr., Woodlawn
 Muehlhause, Ruth Virginia, Baltimore
 Oleszczuk, Melvin Joseph, Baltimore
 Pearlman, Albert, Baltimore
 Pressman, Isadore, Baltimore
 Pucklis, Frank Stanley, Baltimore
 Rhode, John George, Baltimore
 Richman, Jacob Louis, Baltimore
 Rosenberg, Morris, Baltimore
 Schade, Joseph Hollis, Westernport
 Schneyer, Herbert David, Philadelphia, Pa.
 Schwartz, Harry, Baltimore
 Sharp, Martin Burke, Cumberland
 Shuman, Louis Harry, Scotland
 Silverstein, Bernard, Ferndale
 Stoler, Myer, Baltimore
 Sussman, Bernard, Baltimore
 Swearer, Conrad, Larchmont
 Thompson, Robert Edward, Waubay, S. D.
 Vadala, Eugene Clarence, Baltimore
 Wachsmann, Irvin Louis, Baltimore
 Webster, Thomas Clyde, Baltimore
 Wich, Joseph Carlton, Baltimore
 Woody, Earl Leslie, Arbutus
 Zerofsky, Harold, Baltimore
 Zetlin, Henry Paul, Baltimore

FRESHMAN CLASS

Alessi, Alfred Henry, Baltimore
 Allen, Donald Albert, Baltimore
 Amorky, Herman Maurice, Alexandria, Va.
 Baker, Daniel S., Baltimore
 Binstock, Albert, Baltimore
 Blivess, Louis Bernard, Baltimore
 Bowman, Luke Streett, Jr., Baltimore
 Brennan, Thomas Joseph, Baltimore
 Bressler, Sidney Sid, Baltimore
 Brodsky, Alexander Emmanuil, Baltimore
 Broth, Henry Morris, Baltimore
 Bull, Trossett Alexander, Sudlersville

Cohen, Harry, Baltimore
 Dobropolski, Anthony Joseph, Baltimore
 Dorsch, Joseph Urban, Baltimore
 Dosh, Wilbur Hyde, Baltimore
 Ensor, Joseph Clifton, Cockeysville
 Folus, Irving Herbert, Baltimore
 Foxman, Norma Miriam, Baltimore
 Francik, Joseph, Baltimore
 Freedman, Leonard, Baltimore
 Gillis, Andrew Colin, Jr., Baltimore
 Ginsberg, Samuel Harry, Baltimore
 Gitomer, Harold Abraham, Baltimore
 Gitomer, Norman Moses, Baltimore

Glaser, Louis Lester, Baltimore
 Golditch, Henry M., Baltimore
 Gordon, Jeanette, Baltimore
 Gruz, Nathan I., Baltimore
 Hackett, Angela Rose, Baltimore
 Heneson, Irving Jerome, Baltimore
 Herman, Irvin Ralph, Baltimore
 Honigman, Alvin Herbert, Baltimore
 Ichniowski, William Marion, Baltimore
 Jacobs, Eugene, Baltimore
 Kamanitz, Irvin Leonard, Baltimore
 King, James Forrest, Baltimore
 Kline, Sidney, Baltimore
 Knipp, Harry Oliver, Baltimore
 Koontz, John Edward, Baltimore
 Kovitz, Armand, Baltimore
 Kremer, Beryle Philip, Baltimore
 Krepp, Martin William, Jr., Baltimore
 Leise, Joshua Melvin, Baltimore
 Lieberman, Lawrence Lipman, Front Royal, Va.
 Lipsitz, Benjamin, Baltimore
 Loftus, Howard Edmond, Dundalk
 Mask, Jerome, Baltimore
 Massing, David, Baltimore
 Mendelsohn, Daniel, Arbutus
 Mermelstein, Daniel Morris, Baltimore
 Miedusiewski, Francis Joseph, Baltimore
 Miller, Manuel, Baltimore
 Mitnick, Herbert, Baltimore
 Moser, John Taft, Baltimore
 Mutchnik, Melvin, Baltimore
 Norton, John Charles, Baltimore

Odell, James Eldridge, Catonsville
 Okrasinski, Joseph Leon, Baltimore
 Pannone, Armand Milio, Cumberland
 Parker, Katherine Justina, Baltimore
 Passen, Lillian, Baltimore
 Pope, Martha Katharine, Dundalk
 Rangle, Raymond Veto, Baltimore
 Rice, Bernard, Baltimore
 Rosenbaum, Joseph, Baltimore
 Rosenstein, Louis Nathan, Baltimore
 Rostacher, Harry Louis, Brooklyn, N. Y.
 Sabatino, Louis Thomas, Baltimore
 Sachs, Albert, Baltimore
 Sama, Mario Alfred, Baltimore
 Saperstein, Paul, Baltimore
 Sapperstein, Louis, Baltimore
 Shalowitz, Marion, Baltimore
 Snyder, Nathan Morton, Baltimore
 Sollod, Leonard, Baltimore
 Steinbach, Morton, Baltimore
 Sturchio, Lawrence Eugene, Newark, N. J.
 Tolley, Leonard Joseph, Baltimore
 Vanni, Frank Lewis, Baltimore
 Ving, Charles William, Baltimore
 Volkmer, Edward Carrol, Baltimore
 Warminski, Thaddeus John, Baltimore
 Weinstein, Daniel David, Baltimore
 Wicks, Robert Lee, Baltimore
 Wiener, Maurice, Baltimore
 Wikberg, Vieno Hellin, Dundalk
 Wohl, Milton, Baltimore
 Young, George Ira, Catonsville
 Zuskin, Raynard Frank, Baltimore

SPECIAL STUDENTS

Anderson, Clair Sherrill, Littleton, W. Va.
 Baier, John Cletus, Baltimore
 Dobbs, Edward Clarence, Baltimore
 Hamilton, Kathleen B., Baltimore

Marriott, Beatrice, Baltimore
 Mazer, Robert, Baltimore
 Priester, Philip Clinton, Baltimore

THE SUMMER SCHOOL—1935

Abrams, Norman J., Baltimore
 *Adams, Albert C., Bristol, Tenn.
 Adams, Lida C., Trappe
 Adkins, Aline V., Salisbury
 Albin, William D., Rohrer'sville
 Albrecht, Ruth B., Glen Burnie
 Albright, Cora E., Cumberland
 Alder, Betty, Princess Anne
 Alderton, Loretta P., College Park
 Alderton, Mary N., Vale Summit
 Alexander, Nelle M., Accident
 Alter, Irving D., Baltimore
 Ambrose, Herbert D., Baltimore
 Amerman, Theodore, New York City, N. Y.

Amiss, Helen C., Chevy Chase
 Anderson, Janet T., Cumberland
 Andrews, Flora E., Shady Side
 Armstrong, Esther P., Gaithersburg
 *Armstrong, Joseph E., Annapolis
 Arnold, Julia C., Laurel
 Asay, Esther, Riverdale
 Ashley, Martha B., Rock Hall
 Athey, Thomas B., Severna Park
 *Ayres, Thomas B., Rock Hall
 Backhaus, Albert P., Baltimore
 Baer, Kathleen, Finzel
 Bailey, Pauline B., Church Hill
 *Baker, Harry, Jr., Washington, D. C.
 Balch, Clyde W., Hyattsville

Banks, Elizabeth B., Rockville
 Banks, Olive H., Salisbury
 Barber, Pauline R., Charlotte Hall
 Barber, Samuel F., Charlotte Hall
 Barber, Tena B., Vale Summit
 Bardwell, Katharine K., Washington, D. C.
 Bargteil, Ralph, Baltimore
 Barnes, Edna B., Kansas City, Kan.
 *Barnes, Edwin H., Elkton
 *Barnsley, Catherine D., Rockville
 Baron, Herman L., Baltimore
 Barton, Mary W., Hyattsville
 Bartram, Frances S., Berwyn
 *Bartram, M. Thomas, Berwyn
 Batie, Verna O., Laurel
 Bates, Byrtle Y., Damascus
 Bayley, John S., Baltimore
 Beal, Anne A., Washington, D. C.
 Beall, Susie C., Beltsville
 Beatty, Thelma D., Hyattsville
 Beck, Mildred, Cumberland
 Becraft, Mabel V., Washington Grove
 Bell, Bessie M., Thurmont
 Benjamin, Louis, Baltimore
 Bennett, Bertha M., Upper Marlboro
 *Bennett, Dill G., Sharptown
 Bennett, I. Ruth, Flintstone
 Benson, Brian M., Baltimore
 Berger, Herman W., Jr., Baltimore
 Berkowitz, Melvin, Baltimore
 Berman, Bertrand S., Baltimore
 Bernstein, Norman, Washington, D. C.
 *Biggs, Gerald A., Oldtown
 Biggs, Ruth V., Cumberland
 *Bigwood, James F., Indian Head
 Birch, Marian, Hyattsville
 Blacklock, Josiah A., Towson
 Blackman, Raymond S., Vienna, Va.
 *Blue, Elmer C., Takoma Park
 Bogley, Samuel E., Chevy Chase
 Bollman, Roger T., Baltimore
 Bomberger, Hulda B., College Park
 Bonner, Anna B., East New Market
 Bonnett, Warren L., Aberdeen
 Bowen, Gertrude E., Bennings, D. C.
 Booker, Carrie G., Barclay
 *Boston, William T., Linkwood
 Boswell, Alice A., Brookeville
 Bowers, Helma H., Frederick
 Bowie, Jane R., La Plata
 Bowie, William B., Bennings, D. C.
 Bowman, Emma M., Berwyn
 Bowman, Urban N., Landover
 *Brain, Earl F., Frostburg
 *Brandenburg, Annie L., Lisbon

*Graduate Students

Brashears, Florence P., Bennings, D. C.
 Brewer, William, Baltimore
 Brightwell, Ralph E., Lisbon
 Bromwell, Emily, Madison
 Brooke, Roger, Sandy Spring
 Brotemarkle, Martin L., Cumberland
 *Brown, Beulah G., Conneaut, Ohio
 Brown, Dorothy H., Centreville
 Brown, Elizabeth D., Washington, D. C.
 *Brown, George C., Asheville, N. C.
 *Brown, Marshall G., Oakland
 Brown, Maud E., Washington, D. C.
 *Brown, Paul E., Massillon, Ohio
 *Bruehl, John T., Jr., Centreville
 Bryant, Slater W., Jr., Hyattsville
 Buckingham, Dorothy, Mt. Airy
 Burall, Margaret O., Mt. Savage
 Burbank, Melcinia H., Kensington
 Burdette, Eunice E., Bowie
 Burdette, Mildred R., Woodbine
 *Burley, Maude M., Frostburg
 Burrier, Letitia S., Baltimore
 Burroughs, Nellie W., Mechanicsville
 Burroughs, Viola J., Aquasco
 Burton, Beulah M., Washington, D. C.
 *Burton, Fred C., Cumberland
 Burton, Julia H., Washington, D. C.
 Busey, Mary J., Providence, R. I.
 *Busick, James G., Cambridge
 Byer, Henry L., Sparrows Point
 *Caldwell, John H., St. Michaels
 Caldwell, Katherine, Chevy Chase
 Callahan, Lucinda A., Easton
 Callahan, Mary N., Easton
 Campbell, Katherine E., Memphis, Tenn.
 Campbell, Marjorie H., Washington, D. C.
 *Campbell, William P., Hagerstown
 Cannon, Catherine S., Washington, D. C.
 Capalbo, John L., Brooklyn, N. Y.
 Capel, John W., Frostburg
 Carleton, Harold B., Washington, D. C.
 *Carlson, C. Allen, Crisfield
 Carpenter, Virginia P., Washington, D. C.
 *Carr, C. Jelleff, Baltimore
 Carr, Phyllis O., Bartlesville, Okla.
 *Carrington, George F., Crisfield
 Carter, Edward P., Washington, D. C.
 Cashell, Irving G., Washington, D. C.
 Cashell, Mary-Margaret, Washington, D. C.
 Cayton, Marcelle I., Brooklyn, N. Y.
 Chaconas, Harry J., Washington, D. C.
 Chandler, Miriam T., Grayton
 Cheezum, M. Lillian, Preston

Cherrix, Nellie V., Snow Hill
 Cheyney, Elizabeth B., Ballston, Va.
 Chrisler, Willard L., Washington, D. C.
 Cissel, Beatrice S., West Friendship
 *Cissel, Eleanor F., Silver Spring
 Clafin, Alison R., Chevy Chase
 Clark, Ellen N., Silver Spring
 Clark, Fitzhugh, Chevy Chase
 *Clark, Lyal W., Westminster
 Clark, Ralph E., Dundalk
 Clayton, Dorothy R., Relay
 Clements, Samuel B., Washington, D. C.
 *Clevenger, Helen E., Everett, Pa.
 Close, Annie A., Lonaconing
 Close, Marion B., Frostburg
 Cogswell, Charles L., Washington, D. C.
 Cohen, Sidney, Baltimore
 Cole, Mary A., Church Hill
 Collins, Caroline, Washington, D. C.
 Cook, Charlotte C., Washington, D. C.
 Cook, Mildred L., Hyattsville
 Cook, Nellie E., Hyattsville
 Cooke, Charles H., Washington, D. C.
 *Cooke, Virginia B., Washington, D. C.
 Copes, Ella, Silver Spring
 Cornell, Barbara E., Silver Spring
 *Cornell, Florence N., Chevy Chase
 Cosgrove, Katherine D., Lonaconing
 Coulbourn, Alice M., Crisfield
 Cowie, Jean A., Perry Point
 Cox, Tessie, Severna Park
 Craig, Madie E., Brentwood
 Cranford, Lela, Washington, D. C.
 *Crankshaw, Harold G., Washington, D. C.
 Cressman, Kathryn L., Boonsboro
 Cronise, A. Katherine, Frederick
 Crosby, Muriel E., Washington, D. C.
 Crossley, George L., Washington, D. C.
 Crow, Wallace J., Washington, D. C.
 *Cubbage, Nancy, Brentwood
 Culp, Richard T., Chevy Chase
 Curley, Kathryn, Cumberland
 Curley, Erma W., Washington, D. C.
 Cusick, Mary L., Anacostia, D. C.
 Custer, Helen, Friendsville
 *Custis, Edward M., Louisville, Ky.
 Cutler, Dorothy M., Silver Spring
 Cutting, Maude, Washington, D. C.
 Dahn, Eloise N., Chevy Chase
 Danenhower, Myrtle B., Upper Marlboro
 Daniel, Daniel R., Baltimore
 Davidson, Lida M., Washington, D. C.
 Davis, Edward F., Cherrydale, Va.
 Davis, Elsie H., Woodbine
 *Davis, Gertrude J., Frostburg
 Davis, Preston L., Jr., Washington, D. C.

*Graduate Students

Davis, Raymond, Jr., Washington, D. C.
 Davis, Ruth, North East
 Dawson, Roy C., Washington, D. C.
 DeMoss, Mildred V., Cumberland
 Denaburg, Jerome, Baltimore
 Deppish, John R., Aberdeen Proving Grounds
 DePue, Catherine, Washington, D. C.
 Derr, L. Hubert, Monrovia
 *Derr, Melvin H., Thurmont
 Deskin, Mark, Riverdale
 *DesPrez, Frances E., Florence, Ala.
 DeVilbiss, Preston S., III, Walkersville
 *DeVult, Harold M., Barneveld, N. Y.
 DeWilde, Jennie, D., Preston
 Dey, Dorothy R., Wellington, Kan.
 Diamond, Milton A., Brooklyn, N. Y.
 Diggs, Ruth E., Catonsville
 Dinger, Adeline S., Washington, D. C.
 Dittmar, Gordon F., Baltimore
 Dixon, Beulah K., Pocomoke City
 *Dixon, Clara M., Olivet
 Dixon, Marion B., Cumberland
 Dixon, Rebecca W., Mechanicsville
 Dobyns, Elizabeth L., Oldhams, Va.
 Doenges, Helen E., Cambridge
 Donahue, William J., Washington, D. C.
 Dondero, Angela W., Hyattsville
 *Donoho, Dorsey, Marion Station
 Donovan, Dorothy C., Washington, D. C.
 *Doordan, Martin L., Bridgeville, Del.
 Dorsett, Frances E., Indian Head
 Dorsey, Agatha V., Midland
 *Doub, Charles A., Leonardtown
 Doub, June B., Hagerstown
 Douglass, William F., Washington, D. C.
 Downin, John E., Baltimore
 Downs, Glendora M., Williamsport
 Doyle, Catherine M., Washington, D. C.
 *Doyle, Mary J., Westminster
 *Dozois, Kenneth P., Baltimore
 Dryden, Ruth B., Snow Hill
 Dryer, Hilda Y., Washington, D. C.
 *DuBose, Clyde H., Pocomoke City
 Duley, Oscar, Croome Station
 *Dunker, Melvin F. W., Baltimore
 *Dunnigan, Arthur P., Pylesville
 Dunwoody, Ruth M., Baltimore
 Durham, R. Lucille, Forest Hill
 Durisoe, Lela R., Washington, D. C.
 *Dutterer, Barbara M., Westminster
 *Duvall, Maude, Rockville
 *Earhart, Lyman D., Westminster
 Eckenrode, Mary R., Manchester
 *Edgeworth, Clyde B., Towson
 Edson, Peggie M., Washington, D. C.

Edwards, John B., Hyattsville
 Ehrmantraut, Doris W., Washington, D. C.
 Ekas, Alice A., Baltimore
 Eigenbrode, Sanford D., Jr., Baltimore
 Ellegood, Georgia G., Delmar, Del.
 Elliott, E. V., Baltimore
 Elliott, Marguerite A., Washington, D. C.
 Ellis, Bernice A., Washington, D. C.
 Ellis, Elsie B., Cherrydale, Va.
 Ellis, Joseph A., Hebron
 Emmons, Elizabeth, Suitland
 Emory, Adelaide V., Fort Meade
 *Engle, Ruth B., Frostburg
 Epstein, Edwin, Centreville
 Ericson, Charlotte M., Hyattsville
 Ernest, Lois E., Kensington
 Esch, Marion E., Chevy Chase
 Eshenko, Annabelle E., Butte, N. D.
 Eskridge, Maude E., Rhodesdale
 Esworthy, Corrie B., Lisbon
 *Evans, Jesse D., Crisfield
 Evans, Ralph I., Chevy Chase, D. C.
 Evans, Thomas H., Cambridge
 Ewing, Hanna A., Chevy Chase, D. C.
 Ewing, Margaret T., Baltimore
 *Eyler, Marian G., Cumberland
 Falls, Mildred M., Gastonia, N. C.
 Farrell, Hugh, Metuchen, N. J.
 Farwell, Gladys P., Riverdale
 Feddeman, Edna S., Washington, D. C.
 *Felten, Eliza C., Wood, Pa.
 Felton, Charles W., Washington, D. C.
 Fenton, William R., Berwyn
 Finch, Alvah, Baltimore
 Fink, Kenneth, Baltimore
 *Fink, William C., Cordova
 Firmin, Philip, Washington, D. C.
 Fischbach, Anna R., Catonsville
 Fischer, Isadore, Washington, D. C.
 Fisher, Ethel A., Upper Marlboro
 Fisher, Joseph R., Baltimore
 Fisher, Mary C., Rockville
 Fleming, Euclid S., Washington, D. C.
 Flint, Anne L., Chevy Chase, D. C.
 *Flint, Einar P., Washington, D. C.
 *Flook, Elizabeth E., Myersville
 Flowers, Richard H., Baltimore
 Fogle, Frances M., Thurmont
 Footen, Margaret, Hyattsville
 Footen, Paul L., Barton
 Ford, John H., Baltimore
 Forshee, Edith D., Washington, D. C.
 Forshee, Esther L., Washington, D. C.
 Fosbroke, Gerald E., Elkridge
 Foss, George E., Relay

*Graduate Students

Fouts, N. Rebekah, Washington, D. C.
 Fowler, Charles R., Washington, D. C.
 Franklin, Sarah E., Hyattsville
 Frantz, Merle D., Friendsville
 Franzoni, Joseph D., Washington, D. C.
 Freeman, L. Louise, Boonsboro
 Freeman, Willye B., Washington, D. C.
 French, John E., Cordova
 French, Lillian E., Cordova
 Friedman, David, Silver Spring
 Friedman, Harold B., Silver Spring
 Friedman, Jack, Washington, D. C.
 Friend, Chauncey M., Fearer
 Fuchs, Marguerita L., Relay
 Fuller, Ruth M., Riverdale
 Fulmer, Edna M., Frederick
 *Funk, Merle R., Boonsboro
 Fuss, Lucille A., Hagerstown
 Gaczynski, Eugenia T., Jersey City, N. J.
 Galloway, Rhea, Lonaconing
 Ganzert, Mary L., Washington, D. C.
 *Garber, William J., Waynesboro, Va.
 Garey, Lucy V., Baltimore
 Garlock, Edward A., Bethesda
 Gebelein, Conrad G., Baltimore
 Gehauf, Bessie, Frostburg
 Geltmacher, Katharyn L., Rohrerstown
 Gengnagel, Rosella B., Catonsville
 George, Claire C., Washington, D. C.
 Gerrits, Genevieve M., Mt. Rainier
 Gienger, Ada G., Landover
 *Gifford, Elizabeth M., College Park
 Gilbertson, Kenneth G., Bladensburg
 Gillespie, Fannie R., Pocomoke
 Giltner, Harriet C., Washington, D. C.
 *Given, Maurice X., Salem, Va.
 *Glading, Rebekah F., Lanham
 Goldman, Luther C., Washington, D. C.
 Goode, Hazel N. W., Brunswick
 Gordon, Thomas W., Baltimore
 Gossett, Eleanor J., Washington, D. C.
 Gough, Hazel O., Gaithersburg
 *Graham, James G., Washington, D. C.
 Gray, Ellen H., Reisterstown
 Gray, Jane E., Port Tobacco
 Green, Catharine R., College Park
 Green, Hazel L., Hagerstown
 Greenwell, Hope, Leonardtown
 Griffith, Elizabeth W., Laytonsville
 Grimes, Dora E., Ellicott City
 Grimes, Ione C., Takoma Park
 Grimes, John J., Baltimore
 Gross, Charles R., Stemmers Run
 Grove, Harry C., Fairplay
 Gruver, Frances I., Hyattsville

Gullickson, Hazel A., Granite Falls, Minn.
 *Gwynn, Thomas S., Jr., Clinton
 *Hackett, Thomas P., Queen Anne
 Haddaway, Ella, Oxford
 Haines, Helena J., Hyattsville
 Hall, Eleanor, Fairmont, W. Va.
 Hall, George, Washington, D. C.
 Hamill, Lela M., Deer Park
 Hamilton, Elizabeth, College Park
 Hammerlund, Robert O., Washington, D. C.
 Hanna, Mary G., Westernport
 Hannon, Agnes, Frostburg
 Hannon, Alice, Frostburg
 Harbaugh, Melba L., Washington, D. C.
 *Hardell, Elmer P., Washington, D. C.
 Hardell, Nellie G., Washington, D. C.
 Hardy, Mary E., Silver Spring
 Hargy, Francis R., College Park
 Harman, Louise D., Accident
 Harmon, Katharyn E., Salisbury
 Harris, Herman L., Baltimore
 Hart, Leona N., Oakland
 Hartman, Gertrude B., Camden, Del.
 *Haskins, Willard T., Binghamton, N. Y.
 Hauver, Catharine L., Myersville
 Hauver, Charlotte C., Hagerstown
 *Hauver, William E., Myersville
 Hawkins, Elsie, Bethesda
 Hayden, Agnes, Pope's Creek
 Hays, Carlotta A., Braddock Heights
 Hearne, Ethel G., La Plata
 Hebb, John S., III, Baltimore
 *Heironimus, Clark, Washington, D. C.
 Heiss, John W., Washington, D. C.
 *Helbig, Kathryn S., Oakland
 Helfgott, Jack L., Mitchelville
 *Henderson, Eleanor B., Cumberland
 Henley, Robert C., Washington, D. C.
 Heringman, Leo A., Baltimore
 Hersherberger, Anna L., Luray, Va.
 Hess, L. Grace, Fallston
 *Hesse, Claron O., Los Angeles, Calif.
 Hesson, Cassandra T., Thurmont
 Hettleman, Rose, Baltimore
 Heylmun, Stanley L., Baltimore
 Hickman, Mildred, Washington, D. C.
 Hicks, Ara L., Dickerson
 Hicks, Minnie E., Chestertown
 Higgins, Homer S., Cumberland
 *Hill, Elsie, Flintstone
 *Hitchcock, George R. N., Westminster
 Hobbs, Marguerite W., Washington, D. C.
 *Hobbs, Ruth C., Washington, D. C.
 *Hobbs, Violet E., Washington, D. C.
 Hochbaum, Mary E., Washington, D. C.

*Graduate Students

Hodson, Palmer K., Jr., Allison Park, Pa.
 Hoenes, Sophia W., Baltimore
 *Hoffecker, Frank S., Jr., Sparrows Point
 Hoffmaster, Paul, Myersville
 Hohn, Mary D., Port Deposit
 Holland, Marion L., Easton
 *Hollins, Stanley M., Baltimore
 *Holmead, Frances S., Silver Spring
 *Holmes, Grace B., Takoma Park
 Holmes, Margaret V., College Park
 Holmes, Miriam, College Park
 *Holt, Nancy B., Wakefield, Va.
 Hooper, Eunice M., Hoopersville
 Hoose, Richard A., Washington, D. C.
 Hopkins, Grace R., Easton
 *Horne, William A., Chevy Chase
 Hosken, Margaret R., Accokeek
 Hosken, Stella L., Frostburg
 Hough, Dorothy G., Washington, D. C.
 *House, Bolton M., College Park
 House, Mildred L., Flintstone
 House, Theresa R., Collee Park
 Howard, Adrienne R., College Park
 *Howard, Frank L., Hyattsville
 Howard, Marcus L., Washington, D. C.
 *Howard, Margaret L., Dayton
 Howard, Willie E., Frederick
 Hubbard, Etta K., Easton
 Hubbard, Olin W., Cordova
 Hubbert, Tilghman S., Cambridge
 Hudgins, Houlder, Washington, D. C.
 *Hudson, T. Giles, Alberta, Va.
 *Hudson, Yola V., Cumberland
 Hueper, Louis R., Berwyn
 Hughes, Robert L., Aberdeen
 Hull, Dorothy D., Frederick
 *Hull, George R., Frederick
 Hunt, Richard M., Washington, D. C.
 *Hunt, William H., Baltimore
 Hutcheson, Beulah L., Cumberland
 Hutchinson, James E., Hyattsville
 Hutchinson, M. Carol, Takoma Park
 Hutchison, Frances E., Chevy Chase
 Hutchison, Stella B., Cordova
 Hyatt, Herbert S., Damascus
 Hyde, Jennie M., Barton
 Hynson, B. Thomas, Washington Grove
 Insley, F. Maurille, Cambridge
 Irvine, Elsie V., Chevy Chase
 Itzel, Virginia A., Halethorpe
 *Ives, Mildred, Elizabeth City, N. C.
 Jacobs, Hazel, Gaithersburg
 *Jacobs, Marion L., Chapel Hill, N. C.
 James, Jennie P., Mt. Rainier
 James, William S., Hancock
 Jeffries, Anna K., Mt. Savage
 *Jenkins, Stanleigh E., Hyattsville

Jenkinson, Margaret S., Washington, D. C.
 Jennison, Helen G., Chevy Chase
 Jensen, Lorida J., Washington, D. C.
 Jimmyer, John K., Baltimore
 Johnson, Clara R., Washington, D. C.
 Johnson, Edna E., Brentwood
 Jones, Anna B., Snow Hill
 Jones, Dorothy C., Rockville
 Jones, Joseph F., Baltimore
 Jones, Marguerite E., Owings Mills
 *Jones, Mildred S., Edgewater
 *Jones, Robert, Frostburg
 *Jones, Wilbur A., Pittsville
 Jones, William P., Wingate
 Joyce, Agnes C., Frostburg
 Judy, Gladys L., Cumberland
 Kalis, Samuel D., Baltimore
 *Kalousek, George L., Washington, D. C.
 Keefauver, Helen R., University Park
 Keiser, Grace S., Washington, D. C.
 Keitlen, Philip B., Jersey City, N. J.
 Kelley, Mary M., Wye Mills
 *Kelly, Michael J., Washington, D. C.
 Kemp, Mary, Welcome
 Kerby, Melva I., Washington, D. C.
 Kesler, Katherine E., Silver Spring
 *Kessler, Herman, Philadelphia, Pa.
 Ketchum, Paul F., Washington, D. C.
 *Kieeny, Reverdy E., Middletown
 Kimmey, Ruth S., East New Market
 *King, Frances L., Frederick
 *King, Ruth S., Washington, D. C.
 Kirby, Marion, Takoma Park
 *Klein, Truman S., Clinton
 Kline, Annabel C., Frederick
 Kline, Gladys M., Smithsburg
 *Klingsohr, Helen F., College Park
 Kluckhuhn, Frederick H., Laurel
 *Knox, Clarence M., Finksburg
 *Knox, Louis P., Jr., Towson
 *Koerber, Erwin L., Preston
 Kohn, Schuyler G., Baltimore
 *Kookan, Nellie R., Westernport
 Koontz, Jennie G., Cumberland
 *Krausse, Harry W., Baltimore
 Kreiter, Ruth, Washington, D. C.
 Krieg, Edward F., Baltimore
 *Kuhnle, Mary E., Westernport
 Kunes, Geraldine L., Cumberland
 Kunes, Nina E., Cumberland
 Kupka, Anna, Bethesda
 Lam, Gladys I., Cumberland
 *LaMar, Austin A., Jr., Sandy Spring
 *Lanahan, Doris, Laurel
 *Lane, John P., Chevy Chase
 *Late, Erma B., Washington, D. C.

*Graduate Students

Leatherman, Margaret N., Myersville
 Lehr, Emily C., Bethesda
 *Lehr, H. Franklin, Bethesda
 Leighty, Raymond V., Clarendon, Va.
 Leishear, Virginia E., Washington, D. C.
 Levy, Arthur I., Brooklyn, N. Y.
 Lewald, James H., Laurel
 Lewis, Frank H., Frederick
 *Liebman, Rebekah, Norfolk, Va.
 Lighter, Edna K., Middletown
 Lightfoot, Georgiana C., Takoma Park
 *Ligon, Edgar W., Jr., Richmond, Va.
 Ligon, Rosalind, Washington, D. C.
 Lindner, Dorothy E., Washington, D. C.
 Linthicum, Parepa F., Frederick
 Lipin, Edward J., Pasadena
 Liskey, Robert B., Hagerstown
 Litschert, Robert G., Hyattsville
 Little, Lena E., Laurel
 *Littleford, Robert A., Washington, D. C.
 Litz, Helen E., Washington, D. C.
 Lloyd, Lewis H., Washington, D. C.
 Lodge, Fred R., Washington, D. C.
 Loker, Frank F., Leonardtown
 Long, John J., Cumberland
 Love, Elizabeth T., Lonaconing
 Lovell, John C., New Windsor
 Lovell, Marker J., New Windsor
 *Lowe, Cletus D., Shepherdstown, W. Va.
 *Lowe, William E., Marion Station
 Lowery, Norma L., Cumberland
 Lubin, Sam, Washington, D. C.
 *Lucas, Philip E., Cherrydale, Va.
 Ludlow, Francis W., Washington, D. C.
 Lundell, Ernst D., Chevy Chase
 Lutz, Richard L., Riverdale
 Lynch, Elizabeth, Washington, D. C.
 Lyons, Margaret M., Cumberland
 Maccubbin, Mary F., Laurel
 Maddox, H. Louise, Hyattsville
 *Madigan, George F., Washington, D. C.
 Magdeburger, Elviria, Washington, D. C.
 Mahaney, William H., Towson
 Main, Irwin I., Seat Pleasant
 Mandel, Jacob, Jersey City, N. J.
 *Mandrell, John F., Easton
 Mangum, Mary E., Washington, D. C.
 Mangum, Susie A., Washington, D. C.
 Manley, Mary, Midland
 Mann, Mary E., Sharptown
 Marche, Louise C., Hyattsville
 Marino, Frank T., Washington, D. C.
 Maris, Helen B., Riverdale
 Marshall, Susan E., St. Michaels
 Martin, Alta G., Hagerstown
 Martin, Carrie P., Westminster
 Martin, Clarence W., Baltimore

Martin, Grace W., Washington, D. C.
 Marx, Ernest B., Baltimore
 *Massey, John E., Cogersville, Ala.
 Matthews, Abigail G., La Plata
 Matthews, Elizabeth A., Stockton
 Matthews, Robert H., Jr., Cambridge
 Matthews, William B., Worton
 *Mattingly, Jane G., Leonardtown
 Mattingly, Joseph A., Leonardtown
 *Mayer, Lenore A., Frostburg
 Maynard, Stanley A., Baltimore
 McCall, Mildred L., Washington, D. C.
 *McCann, Lewis P., Dayton, Ohio
 McCann, Robert H., Glen Burnie
 *McCauley, Irma G., Washington, D. C.
 McClenon, Donald, Takoma Park
 McCoy, A. Winifred, Brooklyn, N. Y.
 McCurdy, Philip C., Kensington
 McFadden, Burton M., Hagerstown
 *McGowan, George E., Baltimore
 McIntyre, Helen M., Washington, D. C.
 McIntyre, Myrtle E., Cumberland
 McKenna, John M., Baltimore
 McLain, Edward J., Washington, D. C.
 McLaughlin, Thomas O., Woodbridge, N. J.
 McMahan, Elizabeth, Cambridge
 McNaughton, Edwina B., Takoma Park
 *Medlock, Lawrence C., Honea Path, S. C.
 Meese, Louise, Barton
 Meese, Mae, Barton
 Meiring, Mary E., Washington, D. C.
 *Meredith, Francis E., East New Market
 Merrick, James B., Crumpton
 Merrill, William E., Pocomoke City
 Meyers, Edith I., Chevy Chase
 Michaelsen, Elsie E., Washington, D. C.
 *Middleton, Frederic A., Washington, D. C.
 Millar, Dorothy V., Washington, D. C.
 Miller, Cary H., Branchville
 Miller, Ernest Y., Washington, D. C.
 Miller, Jean, Berwyn
 *Miller, Lula A., Bridgewater, Va.
 Miller, Margaret A., Washington, D. C.
 *Miller, Marion E., Easton
 Miller, Philip, Brentwood
 Miller, Rebecca C., Berwyn
 Miller, Verna, Lonaconing
 Milliken, Julia W., Silver Spring
 Mills, Christene P., Washington, D. C.
 Mills, Mary L., Washington, D. C.
 Miltner, Margaret E., Washington, D. C.
 Mitchell, Erma L., Cambridge
 *Mitchell, Laura N., College Park
 Mitchell, M. Alice, Salisbury
 Mitchell, Opal L., Bel Air
 Mitchell, Virginia V., Mechanicsville

*Graduate Students

Mooney, Elizabeth, Kensington
 Moore, Catherine V., Centreville
 Moore, John E., Ellicott City
 Moore, Medora M., East New Market
 *Morgan, Claudine, Lonaconing
 Morgan, Mary, Frostburg
 Morgan, Virginia, Lonaconing
 Morrison, M. Evelyn, Seat Pleasant
 Morse, Armored, Forest Hill
 Moser, Marion O., Frederick
 Mudd, H. Virginia, Pomfret
 Muller, Howard C., Baltimore
 Mulligan, Betty, Berwyn
 Mullikin, Alexandria H., Easton
 Mullinix, Margaret, Damascus
 Mullinix, William D., Damascus
 Murphy, Grace B., Silver Spring
 *Murphy, Harry T., Ellicott City
 Murray, Harold F., Washington, D. C.
 Muth, Bery W., Washington, D. C.
 Nash, Constance M., Chevy Chase
 *Nathanson, Albert E., Washington, D. C.
 Neale, Shirley E., Washington, D. C.
 Neder, Edith, Mt. Savage
 Nelson, Thorman A., Washington, D. C.
 Nevius, Wilford E., College Park
 *Newcomer, Joe C., Brunswick
 *Newman, James P., Blacksburg, Va.
 Newman, Robert A., Chevy Chase
 *Nichols, Wilbur C., Hyattsville
 Nicht, Anna M., Frostburg
 Nicht, Theresa B., Frostburg
 Nicol, Mary B., Gaithersburg
 Nolan, Edna P., Mt. Rainier
 *Norman, Julia T., Annapolis
 Norris, Joseph V., Baltimore
 Norris, Mary L., Leonardtown
 North, Edna R., Easton
 Nowell, Jessie M., Washington, D. C.
 Nowell, Margaret L., Shady Side
 *Nutter, Eva P., Rising Sun
 Nyquist, Hildur V., Princess Anne
 O'Dell, Bernice P., Richwood, W. Va.
 O'Dell, Elizabeth J., Richwood, W. Va.
 Ogle, Emerson, Catonsville
 Oliver, Elmer R., Washington, D. C.
 Orcutt, Charles B., Washington, D. C.
 Ornett, Pauline H., Easton
 Owens, James L., Federalsburg
 Padgett, E. Anne, Baltimore
 Pailthorp, Robert W., Takoma Park
 Palmer, Mary E., Palmers
 Panoff, Mortimer, Brooklyn, N. Y.
 Pardie, Grace, Washington, D. C.
 Parker, Helen M., Vale Summit
 Parsons, Charles R., Washington, D. C.
 Patterson, Norman P., Baltimore

Peach, Ann W., Mitchellville
 Peck, Alvin, Washington, D. C.
 Perry, A. Gordon, Hyattsville
 Perry, Evelyn G., Port Deposit
 Perry, Louise H., Washington, D. C.
 Petrides, George A., Washington, D. C.
 Petty, Mary, Washington, D. C.
 *Phillips, Alice P., Takoma Park
 Phillips, Gladys E., Cambridge
 *Phillips, Watson D., Cambridge
 *Phipps, William R., Easton
 Picken, Marion, Lonaconing
 Piozet, Nina C., Hyattsville
 *Poole, Harry R., Williamsport
 Porter, Wade T., Washington, D. C.
 Posey, Margaret A., La Plata
 Powers, Marie W., Catonsville
 Powley, Mary P., Wingate
 Presley, John T., Lanham
 Pritchett, Hennie G., Bishops Head
 Pruitt, Dorothy M., Berlin
 Pumphrey, Nellie L., Upper Marlboro
 Purnell, Nannie, Ocean City
 Queen, Helen H., Waldorf
 Rafferty, Veronica, Nikep
 Raley, Nellie, Frostburg
 Ramsburg, Helen B., Beltsville
 *Reahl, Ann E., Baltimore
 Reed, Della B., Washington, D. C.
 Reeder, Myrtle L., Clements
 Reeves, Eleanor E., Milestown
 Reich, Elinor G. J., La Plata
 Reidy, Kathryn, Chevy Chase
 Reimann, Frances E., Pompton Lakes, N. J.
 Reitz, Margaret M., Halethorpe
 Remington, Jesse A., Laurel
 Remsberg, Charles H., Frederick
 Remsen, Peter, Takoma Park
 *Rhodes, Louis K., Jr., Queenstown
 Rice, Mary A., Germantown
 *Rice, Russell B., Frostburg
 Richter, Christian F., Jr., Overlea
 Ridder, Garry D., Kitzmiller
 *Riedel, Erna M., Gambrills
 Ritter, Natalie M., Washington, D. C.
 *Rives, John J., Washington, D. C.
 Rives, Miriam E., Washington, D. C.
 Robb, John M., Cumberland
 Roberts, Leota H., Cambridge
 Robertson, Elizabeth K., Rockville
 Robertson, James C., Jr., Baltimore
 *Robertson, Roy L., Elkton
 Robertson, Thomas E., Washington, D. C.
 Robinson, Charles H., Cardiff
 Robinson, Helen C., Bridgeport, W. Va.
 Robinson, Huldah E., Bishop's Head

*Graduate Students

Robinson, Sara A., Cambridge
 Roby, Dorothy V., Riverdale
 Roby, Maud F., Riverdale
 Rockwood, Marion, Silver Spring
 *Roddy, Eleanor J., Frederick
 *Rolston, Frank, Washington, D. C.
 Ropes, John C., Chevy Chase
 Rosenberg, Albert L., Baltimore
 Rosenberg, Theodore, Manchester, N. H.
 Ross, Alice M., Easton
 *Roth, Alfred, Annapolis
 Rothschild, Carl, Chefoo, China
 Rowson, Alice L., North East
 Royer, Martha, Cascade
 Roylance, Merriwether L., Branchville
 Rubin, Hilda R., Baltimore
 Rumsey, Frances E., Kensington
 Ruzicka, Edwin R., Baltimore
 Ryon, Thomas S., Washington, D. C.
 Sacks, Jerome G., Baltimore
 Sadowsky, Ann, North East
 *Sadowsky, Irving, North East
 Saffell, Ada M., West Friendship
 Sager, Ina M., Mt. Rainier
 St. Leger, Marie, Pompton Lakes, N. J.
 Sallow, William H., Baltimore
 *Santini, Antoinette, Burtonsville
 *Sartorius, Ruth W., Pocomoke City
 *Sasscer, Cora D., Chevy Chase
 Savage, Alfred E., Washington, D. C.
 Savage, Verna B., Deer Park
 Scates, Irene A., Gaithersburg
 Schaeffer, Carol J., Washington, D. C.
 Schaefer, Edna M., Frederick
 Schaffer, George H., Jr., Baltimore
 *Scheidy, Charlotte T., Silver Spring
 Schlossnagel, Iva D., Accident
 Schneider, Bernard, Bronx, N. Y.
 *Schollenberger, George S., Laurel, Del.
 Schwab, Alvin R., Washington, D. C.
 Scott, Dorothy V., Berlin
 *Secrist, Ford I., Easton
 Sensenbaugh, Glenn H., Smithsburg
 Sergeant, Edith M., Fairmont, W. Va.
 Sesso, George A., Washington, D. C.
 *Settle, Elizabeth B., Baltimore
 Settle, L. H., Washington, D. C.
 *Severance, Katherine, Gaithersburg
 *Shaw, Ann B., College Park
 Shaw, Haylett B., Chevy Chase
 Shaw, Roberta F., Stewartstown, Pa.
 Sherwood, Anna E., Beltsville
 Shinn, Virginia S., St. Michaels
 Shires, Dorothy W., Cumberland
 *Shirk, Harold G., West Lawn, Pa.
 *Shockey, Virtue M., Smithsburg
 Shreve, Adalyn B., Hyattsville

Shull, Bertha S., Greensboro
 *Sibley, Martha, Milledgeville, Ga.
 Sieling, Frederick W., Annapolis Junction
 Sikes, Ena, Washington, D. C.
 Simon, Ruth, Washington, D. C.
 Sims, Olivia K., Washington, D. C.
 Skelley, Mary F., Oldtown
 *Skinner, Geneva K., Takoma Park
 Sledd, Gladys H., Wake Forest, N. C.
 Sleeman, Mary V., Frostburg
 Sleeman, Ursula C., Frostburg
 Sloan, Margaret H., Lonaconing
 Small, Florence F., Hyattsville
 Smith, A. Lida, Claiborne
 Smith, Charles G., Strasburg, Va.
 *Smith, Ethel L., Washington, D. C.
 *Smith, Helen I., Takoma Park
 *Smith, Mary-Esther, Lonaconing
 Smith, Mary E. M., Frederick
 *Smith, Max A., Clarksville
 Smith, Ruth E., Frederick
 Snead, Maxwell A., Washington, D. C.
 *Snoddy, Margaret L., Lanham
 Snyder, Ruth I., College Park
 *Sollers, Henrietta R., Laurel
 Souder, Letty, Gaithersburg
 *Sowers, Lowell M., Lonaconing
 *Speicher, Kathryn A., Accident
 Speicher, Nelle I., Laurel
 Speicher, Ruth M., Accident
 Spencer, Ethel D., Easton
 *Spicknall, Stella P., Hyattsville
 Springer, Pauline T., Westernport
 Spruill, William T., Brandywine
 Stabler, Mary C., Washington, D. C.
 Stack, Myrtle, Hurlock
 Staples, Sam J., Lanham
 Stark, Elwood V., Aberdeen
 Starr, Peggy E., Hyattsville
 Stearns, Lois E., Mt. Rainier
 Stetson, Margaret B., Washington, D. C.
 Stevens, Grace, Washington, D. C.
 Stiles, Edith L., Rockville
 *Stimpson, Edwin G., College Park
 Stimson, William H., Chevy Chase
 *Stinnett, Lucille L., Brentwood
 Stone, John T., Ferndale
 *Storrs, Dorothy H., Linthicum Heights
 Stotler, Rebecca E., Cumberland
 Strauss, Charles D., Baltimore
 Streett, J. Hemisler, Bradshaw
 *Strider, Edith T., Charles Town, W. Va.
 Strobel, Herman R., Baltimore
 Sugrue, Berned A., Chevy Chase
 *Summers, Charles A., Boonsboro
 Swanson, Margaret E., Washington, D. C.
 Tax, Jerry, Brooklyn, N. Y.

*Graduate Students

*Taylor, Alice E., Perryville
 Taylor, Hilda E., Chesapeake City
 Taylor, Myrtle W., Washington, D. C.
 *Teitelbaum, H. A., Brooklyn, N. Y.
 Tepper, Irving S., Baltimore
 *Graduate Students
 Teter, Naomi R., Cumberland
 *Teter, Sarah K., Bridgeport, W. Va.
 Teunis, Audrey S., Upper Marlboro
 *Thom, Myrtle A., Washington, D. C.
 *Thomas, Catherine B., Takoma Park
 Thomas, Ramsay B., Towson
 Thompson, Irving W., Hillsboro, Va.
 Thompson, Raymond K., Riverdale
 *Todd, Wilton R., Wingate
 Tolker, Ethel B., Silver Spring
 Tompkins, Margaret, Norbeck
 Towers, G. Chester, Preston
 Towner, Ethel L., Washington, D. C.
 Townsend, Lawrence R., Baltimore
 Towson, William O., Baltimore
 Tubbs, Mary C., Salisbury
 Tucker, Lester W., Abingdon
 Tucker, Margaret C., Washington, D. C.
 Tull, Miles T., Marion
 Turner, N. Eva, Malcolm
 *Usilton, Fred G., Jr., Chestertown
 Vandervoort, Susan H., Middletown, Pa.
 Vasa, Vladimir, Washington, D. C.
 Vasa-Kiernan, Helen C., Washington, D. C.
 Venemann, Chester R., Riverdale
 Venemann, Virginia L., Riverdale
 Vogtman, Harry R., Cumberland
 *Wade, Margaret E., Port Tobacco
 Wahl, Carleton H., Silver Spring
 Waite, Merton T., Odenton
 Walker, Grace C., Mitchellville
 Walker Vera H., Ellicott City
 *Wallace, David H., Barclay
 *Waltz, George F., Washington, D. C.
 Ward, Frances E., Brandywine
 *Warren, John, Snow Hill
 *Warren, Ryland M., Washington, D. C.
 *Warren, Warren, Rising Sun
 Washington, Guy M., Washington, D. C.
 *Waskow, Henry B., Baltimore
 Wasserman, Sidney, Baltimore
 *Watkins, Wilma L., Washington Grove
 Webb, Margaret, Hyattsville
 Wedding, Presley A., Washington, D. C.
 Weidemann, Janet S., Washington, D. C.
 Weinberger, Dorothy S., Bethlehem, Pa.
 Weld, John R., Sandy Spring
 Wellington, Ruth E., Takoma Park
 *Weyman, L. Arthur, Washington, D. C.
 Whalin, James T., Hyattsville

Wheatley, Vivian, Rhodesdale
 Wheedleton, Lillie A., Seaford, Del.
 Whitacre, Esther M., Silver Spring
 White, Mary L., Washington, D. C.
 White, William M., Washington, D. C.
 Whiteford, Charles G., Baltimore
 *Whiteford, Henry S., Baltimore
 Whitten, Miriam D., Washington, D. C.
 Wiederlight, Seymour, Brooklyn, N. Y.
 *Wilkinson, Perry O., Washington, D. C.
 Willett, LeRoy G., Washington, D. C.
 Willey, Edward J., Washington, D. C.
 Williams, Edith M., Washington, D. C.
 Williams, William W., Washington, D. C.
 *Williams, Zaidee C., Baltimore
 Williamson, George L., Cumberland
 Willis, Pearl N., Hampstead
 *Wilson, C. Merrick, Poolesville
 Wilson, Iris E., Takoma Park
 Wilson, Josephine, Charlotte Hall
 Wilson, Mary C., Princess Anne
 Wilson, Mary K. S., Friendship
 Wilson, Meredith R., White Hall
 Wilson, Ruby E., Mt. Rainier
 Wimbrow, Ruth N., Hebron
 Winestine, Edith A., Baltimore
 *Wingate, Phillip J., Baltimore
 *Winnemore, Augustine E., Washington,
 D. C.
 *Winstead, Elsie M., Elm City, N. C.

*Graduate Students

Wohlstadter, Leonard, Brooklyn, N. Y.
 *Wold, Catherine T., Washington, D. C.
 *Wolfe, Kathleen, Frostburg
 *Womac, Katye W., Washington, D. C.
 Wood, J. Arthur, Easton
 *Wood, May L., Boyd
 Woodell, John H., Seaford, Del.
 Woodward, Alberta A., Washington, D. C.
 *Wright, Nadia V., Chevy Chase
 Wyvill, Ruth M., Washington, D. C.
 Yarnall, Esther S., Washington, D. C.
 *Yingling, John E., Ellicott City
 Yohn, Lionel, Westminster
 Yonkers, Bernard O., Emmitsburg
 Yonkers, Saranna W., Emmitsburg
 Young, Harold K., Detour
 Young, Irene, Silver Spring
 Young, Jerome L., Washington, D. C.
 Zabrek, Herman M., Washington, D. C.
 Zalis, Daniel L., Baltimore
 Zankel, Max D., Brooklyn, N. Y.
 *Zapponi, Paschal P., Wooster, Ohio
 Zebelean, John, Catonsville
 Zeller, Grace A., Rockville
 Ziegler, Electa, Hagerstown
 Zihlman, Frederick A., Silver Spring
 *Zimmerman, Evelyn, Hopewell, Pa.
 Zimmerman, Mildred F., Baltimore
 *Zimmermann, Verna M., Baltimore

SUMMARY OF STUDENT ENROLLMENT AS OF JUNE 1, 1936

RESIDENT COLLEGIATE COURSES—ACADEMIC YEAR.

| | College Park | Baltimore | Total |
|---|-----------------|-----------|-------|
| College of Agriculture | 207 | ..... | 207 |
| College of Arts and Sciences..... | 894 | ..... | 894 |
| School of Dentistry ..... | ..... | 325 | 325 |
| College of Education..... | 312 | ..... | 312 |
| College of Engineering..... | 315 | ..... | 315 |
| Graduate School | 198 | ..... | 198 |
| College of Home Economics..... | 140 | ..... | 140 |
| School of Law..... | ..... | 258 | 258 |
| School of Medicine ..... | ..... | 422 | 422 |
| School of Nursing ..... | ..... | 125 | 125 |
| School of Pharmacy ..... | ..... | 291 | 291 |
| Total | 2066 | 1421 | 3487 |
| SUMMER SCHOOL, 1935 | 979 | ..... | 979 |
| EXTENSION COURSES: | | | |
| Industrial Education (Collegiate Credit)..... | 229 | ..... | 229 |
| Mining (Sub-Collegiate Credit)..... | 274 | ..... | 274 |
| Grand Total | 3548 | 1421 | 4969 |
| Less Duplications | 317 | ..... | 358 |
| Net Total | 3231 | 1421 | 4611 |

Enrollment in Short Courses of from two days to six weeks; Rural Women, 736; Boys' and Girls' Club, 324; Volunteer Firemen, 95; Florists, 33; Nurserymen, 53; Garden School, 313; Canner's Conference, 45; Winter School, 11.

GENERAL INDEX

| | Page | | Page |
|---|----------|---|---------------|
| Administration | | College of Agriculture..... | 63 |
| board of regents..... | 7 | College of Arts and Sciences..... | 87 |
| officers of administration..... | 8 | College of Education..... | 112 |
| boards and committees..... | 16 | College of Engineering..... | 131 |
| officers of instruction (College Park)..... | 9 | College of Home Economics..... | 142 |
| officers of instruction (Baltimore)..... | 25 | Committees | 16, 36 |
| faculty committees (Baltimore)..... | 36 | Comparative Literature..... | 216 |
| administrative organization..... | 38 | County agents..... | 21 |
| buildings | 39 | demonstration agents..... | 23 |
| libraries | 41 | Course of study, description of..... | 191 |
| Admission | 41 | Dairy husbandry | 73, 217 |
| methods of admission..... | 43 | Dentistry, School of..... | 162 |
| advanced standing..... | 43 | advanced standing..... | 165 |
| certificate | 43 | building | 163 |
| entrance | 41 | department | 167 |
| examination, by..... | 43 | equipment | 166 |
| physical examinations | 46 | expenses | 167 |
| transfer | 45 | promotion | 166 |
| unclassified students | 45 | residence | 163 |
| Agents | 21 | Diamondback | 61 |
| assistant county | 22 | Divisions, College of Arts and Sciences | 87 |
| assistant home demonstration..... | 23 | lower division..... | 89 |
| county | 21 | humanities | 91 |
| county home demonstration..... | 22 | natural sciences..... | 93 |
| local | 23 | social sciences..... | 106 |
| Agricultural Education..... | 120, 229 | Dormitory rules..... | 53 |
| Agriculture, College of..... | 63 | Drawing | 237 |
| admission | 63 | Economics | 220 |
| curricula in..... | 64 | agricultural | 192 |
| departments | 63 | Education | 112, 223 |
| farm practice | 64 | history and principles..... | 223 |
| fellowships | 64, 154 | methods in arts and science subjects | |
| requirements for graduation..... | 64 | (high school)..... | 226 |
| special students in agriculture..... | 83 | agricultural | 120, 229 |
| State Board of..... | 187 | arts and science..... | 116 |
| Agronomy | 68, 195 | curricula | 117 |
| Alumni | 62 | degrees | 113 |
| Animal husbandry..... | 70, 197 | departments | 112 |
| Aquiculture | 297 | home economics | 123, 225 |
| Arts and Sciences, College of..... | 87 | industrial | 124 |
| advanced standing..... | 87 | physical..... | 128, 161, 232 |
| advisers | 91 | teachers' special diploma..... | 113 |
| degrees | 87 | Educational psychology..... | 225 |
| departments | 86 | Education, College of..... | 112 |
| divisions | 87 | Electrical Engineering..... | 135, 238 |
| electives in other colleges and schools..... | 91 | Employment, student..... | 55 |
| normal load..... | 87 | Engineering | 131, 235 |
| requirements.....87, 91, 92, 94, 95, 106, 107 | | civil | 135, 235 |
| student responsibility | 89 | drawing | 237 |
| Astronomy | 199 | electrical | 138, 238 |
| Athletics | 161 | general subjects..... | 240 |
| Bacteriology | 70 | mechanics | 240 |
| Biochemistry, plant physiology..... | 208 | mechanical | 140, 241 |
| Biophysics | 208 | shop | 244 |
| Board of Regents | 7 | surveying | 244 |
| Botany | 71, 204 | admission requirements..... | 131 |
| Buildings | 39 | bachelor degrees..... | 132 |
| Business Administration..... | 107, 220 | curricula | 134 |
| Calendar | 4 | equipment | 132 |
| Certificates, Degrees and..... | 49 | library | 134 |
| Chemistry | 96, 209 | master of science in..... | 132 |
| agricultural | 96, 213 | professional degrees in..... | 132 |
| analytical | 96, 210 | English Language and Literature..... | 245 |
| curricula | 96 | Entomology | 75, 251 |
| general | 97, 209 | Entrance | 41 |
| industrial | 96, 215 | Examinations | 45 |
| organic | 210 | delinquent students..... | 49 |
| physical | 212 | Expenses.....50, 167, 174, 177, 180, 186 | |
| research | 96 | Extension Service..... | 86 |
| Chesapeake Biological Laboratory..... | 299 | staff | 20 |
| Chorus | 284 | Experiment Station, Agricultural..... | 84 |
| Christian Association, the..... | 61 | staff | 18 |
| Civil Engineering..... | 135, 235 | Faculty | 9 |
| Clubs, miscellaneous..... | 60 | Farm forestry | 189, 254 |

GENERAL INDEX

| | Page | | Page |
|--|--------------|---|---------------|
| Farm management..... | 66, 254 | expenses | 180 |
| Farm mechanics..... | 77, 254 | hours on duty..... | 179 |
| Feed, Fertilizer, and Lime Inspection Service | 188 | programs offered | 178 |
| Five Year Combined Arts and Nursing Curriculum | 105, 182 | Officers, administrative..... | 8 |
| Floriculture | 79, 263 | of instruction | 9, 25 |
| Foods and nutrition..... | 259 | Old Line | 61 |
| Forestry, State Department of..... | 189 | Olericulture | 80, 266 |
| course in..... | 254 | Pathology | 70, 199 |
| Fraternities and Sororities..... | 60 | Pharmacy, School of..... | 184 |
| French | 277 | admission | 185 |
| Genetics | 78, 255, 298 | degrees | 186 |
| Geology | 255 | expenses | 186 |
| Geological Survey..... | 190 | location | 184 |
| German | 280 | Phi Kappa Phi..... | 59 |
| Grading system | 47 | Philosophy | 284 |
| Graduate School, The..... | 147 | Physical Education | 128, 161, 232 |
| admission | 145 | Physical examinations | 46 |
| council | 147 | Physics | 100, 286 |
| courses | 149 | Plant pathology..... | 73, 206 |
| fees | 154 | Plant physiology..... | 72, 208 |
| fellowships and assistantships..... | 154 | Political Science..... | 289 |
| registration | 148 | Pomology | 79, 262 |
| residence requirements | 151 | Poultry husbandry..... | 82, 290 |
| summer graduate work..... | 149 | Pre-dental curriculum..... | 104 |
| Greek | 235 | Pre-medical curriculum..... | 103 |
| Health Service | 46 | Princess Anne Academy..... | 39 |
| History | 235 | Psychology | 225, 291 |
| Historical statement..... | 37 | Public speaking | 294 |
| Home Economics..... | 142, 259 | Publications, student..... | 61 |
| degree | 142 | Refunds | 54 |
| departments | 142 | Regimental Organization..... | 318 |
| facilities | 142 | Register of students..... | 320 |
| general | 143 | Registration, date of..... | 4, 5 |
| curricula | 142 | penalty for late..... | 42, 52, 167 |
| Home Economics Education..... | 123, 228 | Regulations, grades, degrees..... | 47 |
| Honors and awards..... | 56, 300 | degrees and certificates..... | 49 |
| Horticultural State department..... | 188 | elimination of delinquent students..... | 49 |
| Horticulture | 78, 262 | examinations and grades..... | 48 |
| floriculture | 80, 263 | regulation of studies..... | 47 |
| landscape gardening..... | 81, 264 | reports | 49 |
| olericulture | 80, 266 | Religious influences | 61 |
| pomology | 79, 262 | Reserve Officers' Training Corps..... | 157, 318 |
| vegetable crops..... | 263 | Residence and Non-residence..... | 53 |
| Hospital | 41, 175, 176 | Room reservation | 53 |
| Industrial Education | 124 | Rural Education..... | 120, 229 |
| Infirmary rules..... | 46 | Seed Inspection Service..... | 189 |
| Landscape gardening..... | 81, 264 | Societies | 59 |
| Latin | 265 | honorary fraternities | 59 |
| Law, The School of..... | 171 | fraternities and sororities..... | 60 |
| advanced standing..... | 173 | miscellaneous clubs and societies..... | 60 |
| admission | 172 | Sociology | 292 |
| combined program of study..... | 110, 173 | Soils | 69, 220 |
| fees and expenses..... | 174 | Solomons Island research..... | 299 |
| Libraries | 41 | Sororities | 60 |
| Library Science | 269 | Spanish | 282 |
| Live Stock Sanitary Service..... | 188 | Speech | 294 |
| Mathematics | 98, 269 | State Board of Agriculture..... | 187 |
| Mechanical Engineering..... | 140, 241 | Statistics, course in..... | 255 |
| Mechanics | 240 | Student | |
| Medals and prizes..... | 56, 312 | employment | 55 |
| Medicine, School of..... | 175 | government | 58 |
| admission | 176 | Grange | 60 |
| clinical facilities | 175 | organization and activities..... | 58 |
| dispensaries and laboratories..... | 176 | publications | 61 |
| expenses | 177 | Summer camps | 159 |
| prizes and scholarships..... | 176 | Summer session | 156 |
| Microchemistry (plant)..... | 208 | credits and certificates..... | 156 |
| Military Science and Tactics..... | 46, 157, 318 | graduate work..... | 149, 156 |
| Modern Languages, Courses in..... | 253 | terms of admission..... | 156 |
| Music | 102, 283 | Surveying | 244 |
| Musical organizations | 284 | Terrapin | 61 |
| Nursing, School of..... | 178 | Textiles and clothing..... | 145, 259 |
| admission | 179 | Uniforms, military..... | 158 |
| combined program..... | 105, 180 | Vegetable crops | 263 |
| degree and diploma..... | 183 | Weather Service, State..... | 189 |
| | | Withdrawals | 54 |
| | | Zoology | 102, 295 |

GENERAL INDEX

| | Page | | Page |
|--|--------------|---|---------------|
| Farm management..... | 66, 254 | expenses | 180 |
| Farm mechanics..... | 77, 254 | hours on duty..... | 170 |
| Feed, Fertilizer, and Lime Inspection Service..... | 188 | programs offered | 178 |
| Five Year Combined Arts and Nursing Curriculum | 105, 182 | Officers, administrative..... | 9 |
| Floriculture | 79, 263 | of instruction | 9, 25 |
| Feeds and nutrition..... | 259 | Old Line | 91 |
| Forestry, State Department of..... | 189 | Olericulture | 80, 266 |
| course in..... | 254 | Pathology | 70, 190 |
| Fraternities and Sororities..... | 60 | Pharmacy, School of..... | 184 |
| French | 277 | admission | 185 |
| Genetics | 78, 255, 298 | degrees | 186 |
| Geology | 255 | expenses | 186 |
| Geological Survey..... | 190 | location | 184 |
| German | 280 | Phi Kappa Phi..... | 59 |
| Grading system | 47 | Philosophy | 284 |
| Graduate School, The..... | 147 | Physical Education | 128, 161, 232 |
| admission | 145 | Physical examinations | 46 |
| council | 147 | Physics | 100, 286 |
| courses | 149 | Plant pathology..... | 73, 266 |
| fees | 154 | Plant physiology..... | 72, 268 |
| fellowships and assistantships..... | 154 | Political Science..... | 280 |
| registration | 148 | Pomology | 79, 262 |
| residence requirements | 151 | Poultry husbandry..... | 82, 290 |
| summer graduate work..... | 149 | Pre-dental curriculum..... | 104 |
| Greek | 235 | Pre-medical curriculum..... | 103 |
| Health Service | 46 | Princess Anne Academy..... | 30 |
| History | 235 | Psychology | 225, 291 |
| Historical statement..... | 37 | Public speaking | 264 |
| Home Economics..... | 142, 259 | Publications, student..... | 61 |
| degree | 142 | Refunds | 54 |
| departments | 142 | Regimental Organization..... | 318 |
| facilities | 142 | Register of students..... | 320 |
| general | 143 | Registration, date of..... | 4, 5 |
| curricula | 142 | penalty for late..... | 42, 52, 167 |
| Home Economics Education..... | 123, 228 | Regulations, grades, degrees..... | 47 |
| Honors and awards..... | 56, 300 | degrees and certificates..... | 46 |
| Horticultural State department..... | 188 | elimination of delinquent students..... | 49 |
| Horticulture | 78, 262 | examinations and grades..... | 48 |
| floriculture | 80, 263 | regulation of studies..... | 47 |
| landscape gardening..... | 81, 264 | reports | 49 |
| olericulture | 80, 266 | Religious influences | 61 |
| potomology | 79, 262 | Reserve Officers' Training Corps..... | 157, 318 |
| vegetable crops..... | 263 | Residence and Non-residence..... | 53 |
| Hospital | 41, 175, 176 | Room reservation | 53 |
| Industrial Education | 124 | Rural Education..... | 120, 229 |
| Infirmaries rules..... | 46 | Seed Inspection Service..... | 189 |
| Landscape gardening..... | 81, 264 | Societies | 59 |
| Latin | 265 | honorary fraternities | 59 |
| Law, The School of..... | 171 | fraternities and sororities..... | 60 |
| advanced standing..... | 173 | miscellaneous clubs and societies..... | 60 |
| admission | 172 | Sociology | 292 |
| combined program of study..... | 110, 173 | Soils | 69, 226 |
| fees and expenses..... | 174 | Solomons Island research..... | 209 |
| Libraries | 41 | Sororities | 60 |
| Library Science | 269 | Spanish | 282 |
| Live Stock Sanitary Service..... | 188 | Speech | 294 |
| Mathematics | 98, 269 | State Board of Agriculture..... | 1-7 |
| Mechanical Engineering..... | 140, 241 | Statistics, course in..... | 255 |
| Mechanics | 240 | Student | |
| Medals and prizes..... | 56, 312 | employment | 55 |
| Medicine, School of..... | 175 | government | 58 |
| admission | 176 | Grange | 60 |
| clinical facilities | 175 | organization and activities..... | 58 |
| dispensaries and laboratories..... | 176 | publications | 61 |
| expenses | 177 | Summer camps | 159 |
| prizes and scholarships..... | 176 | Summer session | 150 |
| Microchemistry (plant)..... | 208 | credits and certificates..... | 150 |
| Military Science and Tactics..... | 46, 157, 318 | graduate work..... | 149, 150 |
| Modern Languages, Courses in..... | 253 | terms of admission..... | 150 |
| Music | 102, 283 | Surveying | 244 |
| Musical organizations | 284 | Terrapin | 61 |
| Nursing, School of..... | 178 | Textiles and clothing..... | 145, 250 |
| admission | 179 | Uniforms, military..... | 158 |
| combined program..... | 105, 180 | Vegetable crops | 200 |
| degree and diploma..... | 183 | Weather Service, State..... | 181 |
| | | Withdrawals | 51 |
| | | Zoology | 102, 297 |

Any further information desired concerning the University of Maryland will be furnished upon application to
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